QA
55
B75
1907

Dr. C. BREMIKERS

TAFELN

VIERSTELLIGER

LOGARITHMEN.

DRITTE AUFLAGE

BESORGT

VON

PROFESSOR Dr. **A. KALLIUS,**
OBERLEHRER AM KÖNIGSTÄDTISCHEN GYMNASIUM IN BERLIN.

BERLIN
WEIDMANNSCHE BUCHHANDLUNG
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TAFEL III.

DIE

LOGARITHMEN

DER

TRIGONOMETRISCHEN FUNCTIONEN,

VON 0° BIS 8°

FÜR JEDES HUNDERTSTEL,

VON 8° BIS 45°

FÜR JEDES ZEHNTEL

DES

GRADES.

M682792

1/100	Lg. Sin.	d.	Lg. Tang.	d. c.	Lg. Cot	Lg. Cos.		P. P.
00	—		—		—	0.0000	100	86 85 84
01	6.2419		6.2419		3.7581	0.0000	99	1 8.6 8.5 8.4
02	6.5429	—	6.5429	—	3.4571	0.0000	98	2 17.2 17.0 16.8
03	6.7190	—	6.7190	—	3.2810	0.0000	97	3 25.8 25.5 25.2
		—		—				4 34.4 34.0 33.6
04	6.8439		6.8439		3.1561	0.0000	96	5 43.0 42.5 42.0
05	6.9408	969	6.9408	969	3.0592	0.0000	95	6 51.6 51.0 50.4
06	7.0200	792	7.0200	792	2.9800	0.0000	94	7 60.2 59.5 58.8
		670		670				8 68.8 68.0 67.2
07	7.0870		7.0870		2.9130	0.0000	93	9 77.4 76.5 75.6
08	7.1450	580	7.1450	580	2.8550	0.0000	92	83 82 81
09	7.1961	511	7.1961	511	2.8039	0.0000	91	1 8.3 8.2 8.1
10	7.2419	458	7.2419	458	2.7581	0.0000	90	2 16.6 16.4 16.2
		414		414				3 24.9 24.6 24.3
11	7.2833		7.2833		2.7167	0.0000	89	4 33.2 32.8 32.4
12	7.3211	378	7.3211	378	2.6789	0.0000	88	5 41.5 41.0 40.5
13	7.3558	347	7.3558	347	2.6442	0.0000	87	6 49.8 49.2 48.6
		322		322				7 58.1 57.4 56.7
14	7.3880		7.3880		2.6120	0.0000	86	8 66.4 65.6 64.8
15	7.4180	300	7.4180	300	2.5820	0.0000	85	9 74.7 73.8 72.9
16	7.4460	280	7.4460	280	2.5540	0.0000	84	79 78 77
		263		263				1 7.9 7.8 7.7
17	7.4723		7.4723		2.5277	0.0000	83	2 15.8 15.6 15.4
18	7.4971	248	7.4972	249	2.5028	0.0000	82	3 23.7 23.4 23.1
19	7.5206	235	7.5206	234	2.4794	0.0000	81	4 31.6 31.2 30.8
		223		223				5 39.5 39.0 38.5
20	7.5429	212	7.5429	212	2.4571	0.0000	80	6 47.4 46.8 46.2
21	7.5641		7.5641		2.4359	0.0000	79	7 55.3 54.6 53.9
22	7.5843	202	7.5843	202	2.4157	0.0000	78	8 63.2 62.4 61.6
23	7.6036	193	7.6036	193	2.3964	0.0000	77	9 71.1 70.2 69.3
		185		185				76 75 74
24	7.6221		7.6221		2.3779	0.0000	76	1 7.6 7.5 7.4
25	7.6398	177	7.6398	177	2.3602	0.0000	75	2 15.2 15.0 14.8
26	7.6568	170	7.6569	171	2.3431	0.0000	74	3 22.8 22.5 22.2
		164		163				4 30.4 30.0 29.6
27	7.6732		7.6732		2.3268	0.0000	73	5 38.0 37.5 37.0
28	7.6890	158	7.6890	158	2.3110	0.0000	72	6 45.6 45.0 44.4
29	7.7043	153	7.7043	153	2.2957	0.0000	71	7 53.2 52.5 51.8
30	7.7190	147	7.7190	147	2.2810	0.0000	70	8 60.8 60.0 59.2
		142		142				9 68.4 67.5 66.6
31	7.7332		7.7332		2.2668	0.0000	69	73 72 71
32	7.7470	138	7.7470	138	2.2530	0.0000	68	1 7.3 7.2 7.1
33	7.7604	134	7.7604	134	2.2396	0.0000	67	2 14.6 14.4 14.2
		130		130				3 21.9 21.6 21.3
34	7.7734		7.7734		2.2266	0.0000	66	4 29.2 28.8 28.4
35	7.7859	125	7.7860	126	2.2140	0.0000	65	5 36.5 36.0 35.5
36	7.7982	123	7.7982	122	2.2018	0.0000	64	6 43.8 43.2 42.6
		119		119				7 51.1 50.4 49.7
37	7.8101		7.8101		2.1899	0.0000	63	8 58.4 57.6 56.8
38	7.8217	116	7.8217	116	2.1783	0.0000	62	9 65.7 64.8 63.9
39	7.8329	112	7.8329	112	2.1671	0.0000	61	69 68 67
40	7.8439	110	7.8439	110	2.1561	0.0000	60	1 6.9 6.8 6.7
		108		108				2 13.8 13.6 13.4
41	7.8547		7.8547		2.1453	0.0000	59	3 20.7 20.4 20.1
42	7.8651	104	7.8651	104	2.1349	0.0000	58	4 27.6 27.2 26.8
43	7.8753	102	7.8754	103	2.1246	0.0000	57	5 34.5 34.0 33.5
		100		99				6 41.4 40.8 40.2
44	7.8853		7.8853		2.1147	0.0000	56	7 48.3 47.6 46.9
45	7.8951	98	7.8951	98	2.1049	0.0000	55	8 55.2 54.4 53.6
46	7.9046	95	7.9046	95	2.0954	0.0000	54	9 62.1 61.2 60.3
		94		94				66 65 64
47	7.9140		7.9140		2.0860	0.0000	53	1 6.6 6.5 6.4
48	7.9231	91	7.9231	91	2.0769	0.0000	52	2 13.2 13.0 12.8
49	7.9321	90	7.9321	90	2.0678	0.0000	51	3 19.8 19.5 19.2
50	7.9408	87	7.9409	88	2.0591	0.0000	50	4 26.4 26.0 25.6
								5 33.0 32.5 32.0
								6 39.6 39.0 38.4
								7 46.2 45.5 44.8
								8 52.8 52.0 51.2
								9 59.4 58.5 57.6
	Lg. Cos.	d.	Lg. Cot.	d. c.	Lg. Tang.	Lg. Sin.	1/100	

1/100	Lg. Sin.	d.	Lg. Tang.	d. c.	Lg. Cot.	Lg. Cos.		P. P.		
50	7.9408	86	7.9409	86	2.0591	0.0000	50		63	62	61
51	7.9494	85	7.9495	84	2.0505	0.0000	49	1	6.3	6.2	6.1
52	7.9579	82	7.9579	83	2.0421	0.0000	48	2	12.6	12.4	12.2
53	7.9661	82	7.9662	81	2.0338	0.0000	47	3	18.9	18.6	18.3
54	7.9743	79	7.9743	80	2.0257	0.0000	46	4	25.2	24.8	24.4
55	7.9822	79	7.9823	78	2.0177	0.0000	45	5	31.5	31.0	30.5
56	7.9901	76	7.9901	77	2.0099	0.0000	44	6	37.8	37.2	36.6
57	7.9977	76	7.9978	75	2.0022	0.0000	43	7	44.1	43.4	42.7
58	8.0053	74	8.0053	74	1.9947	0.0000	42	8	50.4	49.6	48.8
59	8.0127	73	8.0127	73	1.9873	0.0000	41	9	56.7	55.8	54.9
60	8.0200	72	8.0200	72	1.9800	0.0000	40		60	59	58
61	8.0272	71	8.0272	71	1.9728	0.0000	39	1	6.0	5.9	5.8
62	8.0343	69	8.0343	69	1.9657	0.0000	38	2	12.0	11.8	11.6
63	8.0412	68	8.0412	69	1.9588	0.0000	37	3	18.0	17.7	17.4
64	8.0480	68	8.0481	67	1.9519	0.0000	36	4	24.0	23.6	23.2
65	8.0548	66	8.0548	66	1.9452	0.0000	35	5	30.0	29.5	29.0
66	8.0614	65	8.0614	66	1.9386	0.0000	34	6	36.0	35.4	34.8
67	8.0679	65	8.0680	64	1.9320	0.0000	33	7	42.0	41.3	40.6
68	8.0744	63	8.0744	63	1.9256	0.0000	32	8	48.0	47.2	46.4
69	8.0807	63	8.0807	63	1.9193	0.0000	31	9	54.0	53.1	52.2
70	8.0870	61	8.0870	62	1.9130	0.0000	30		57	56	55
71	8.0931	61	8.0932	60	1.9068	0.0000	29	1	5.7	5.6	5.5
72	8.0992	60	8.0992	60	1.9008	0.0000	28	2	11.4	11.2	11.0
73	8.1052	59	8.1052	59	1.8948	0.0000	27	3	17.1	16.8	16.5
74	8.1111	58	8.1111	59	1.8889	0.0000	26	4	22.8	22.4	22.0
75	8.1169	58	8.1170	57	1.8830	0.0000	25	5	28.5	28.0	27.5
76	8.1227	57	8.1227	57	1.8773	0.0000	24	6	34.2	33.6	33.0
77	8.1284	56	8.1284	56	1.8716	0.0000	23	7	39.9	39.2	38.5
78	8.1340	55	8.1340	55	1.8660	0.0000	22	8	45.6	44.8	44.0
79	8.1395	55	8.1395	55	1.8605	0.0000	21	9	51.3	50.4	49.5
80	8.1450	53	8.1450	54	1.8550	0.0000	20		54	53	52
81	8.1503	54	8.1504	53	1.8496	0.0000	19	1	5.4	5.3	5.2
82	8.1557	52	8.1557	53	1.8443	0.0000	18	2	10.8	10.6	10.4
83	8.1609	52	8.1610	52	1.8390	0.0000	17	3	16.2	15.9	15.6
84	8.1661	52	8.1662	51	1.8338	0.0000	16	4	21.6	21.2	20.8
85	8.1713	51	8.1713	51	1.8287	0.0000	15	5	27.0	26.5	26.0
86	8.1764	50	8.1764	50	1.8236	0.0000	14	6	32.4	31.8	31.2
87	8.1814	49	8.1814	50	1.8186	9.9999	13	7	37.8	37.1	36.4
88	8.1863	49	8.1864	49	1.8136	9.9999	12	8	43.2	42.4	41.6
89	8.1912	49	8.1913	49	1.8087	9.9999	11	9	48.6	47.7	46.8
90	8.1961	48	8.1962	48	1.8038	9.9999	10		51	50	49
91	8.2009	47	8.2010	47	1.7990	9.9999	09	1	5.1	5.0	4.9
92	8.2056	47	8.2057	47	1.7943	9.9999	08	2	10.2	10.0	9.8
93	8.2103	47	8.2104	46	1.7896	9.9999	07	3	15.3	15.0	14.7
94	8.2150	46	8.2150	46	1.7850	9.9999	06	4	20.4	20.0	19.6
95	8.2196	45	8.2196	46	1.7804	9.9999	05	5	25.5	25.0	24.5
96	8.2241	45	8.2242	45	1.7758	9.9999	04	6	30.6	30.0	29.4
97	8.2286	45	8.2287	44	1.7713	9.9999	03	7	35.7	35.0	34.3
98	8.2331	44	8.2331	45	1.7669	9.9999	02	8	40.8	40.0	39.2
99	8.2375	44	8.2376	43	1.7624	9.9999	01	9	45.9	45.0	44.1
100	8.2419		8.2419		1.7581	9.9999	00		48	47	46
								1	4.8	4.7	4.6
								2	9.6	9.4	9.2
								3	14.4	14.1	13.8
								4	19.2	18.8	18.4
								5	24.0	23.5	23.0
								6	28.8	28.2	27.6
								7	33.6	32.9	32.2
								8	38.4	37.6	36.8
								9	43.2	42.3	41.4
									45	44	43
								1	4.5	4.4	4.3
								2	9.0	8.8	8.6
								3	13.5	13.2	12.9
								4	18.0	17.6	17.2
								5	22.5	22.0	21.5
								6	27.0	26.4	25.8
								7	31.5	30.8	30.1
								8	36.0	35.2	34.4
								9	40.5	39.6	38.7
	Lg. Cos.	d.	Lg. Cot.	d. c.	Lg. Tang.	Lg. Sin.	1/100				

1/100	Lg. Sin.	d.	Lg. Tang.	d. c.	Lg. Cot.	Lg. Cos.		P. P.		
00	8.2419		8.2419		1.7581	9.9999	100		43	42
		43		43				1	4.3	4.2
01	8.2462		8.2462		1.7538	9.9999	99	2	8.6	8.4
02	8.2505	43	8.2505	43	1.7495	9.9999	98	3	12.9	12.6
03	8.2547	42	8.2548	43	1.7452	9.9999	97	4	17.2	16.8
		42		42				5	21.5	21.0
04	8.2589		8.2590		1.7410	9.9999	96	6	25.8	25.2
05	8.2630	41	8.2631	41	1.7369	9.9999	95	7	30.1	29.4
06	8.2672	42	8.2672	41	1.7328	9.9999	94	8	34.4	33.6
		40		41				9	38.7	37.8
07	8.2712		8.2713		1.7287	9.9999	93		41	40
08	8.2753	41	8.2754	41	1.7246	9.9999	92	1	4.1	4.0
09	8.2793	40	8.2794	40	1.7206	9.9999	91	2	8.2	8.0
		39		39				3	12.3	12.0
10	8.2832	40	8.2833	40	1.7167	9.9999	90	4	16.4	16.0
11	8.2872		8.2873		1.7127	9.9999	89	5	20.5	20.0
12	8.2911	39	8.2912	39	1.7088	9.9999	88	6	24.6	24.0
13	8.2949	38	8.2950	38	1.7050	9.9999	87	7	28.7	28.0
		39		38				8	32.8	32.0
14	8.2988		8.2988		1.7012	9.9999	86	9	36.9	36.0
15	8.3025	37	8.3026	38	1.6974	9.9999	85		39	38
16	8.3063	38	8.3064	38	1.6936	9.9999	84	1	3.9	3.8
		37		37				2	7.8	7.6
17	8.3100		8.3101		1.6899	9.9999	83	3	11.7	11.4
18	8.3137	37	8.3138	37	1.6862	9.9999	82	4	15.6	15.2
19	8.3174	37	8.3175	37	1.6825	9.9999	81	5	19.5	19.0
		36		36				6	23.4	22.8
20	8.3210		8.3211		1.6789	9.9999	80	7	27.3	26.6
		36		36				8	31.2	30.4
21	8.3246		8.3247		1.6753	9.9999	79	9	35.1	34.2
22	8.3282	36	8.3283	36	1.6717	9.9999	78		37	36
23	8.3317	35	8.3318	35	1.6682	9.9999	77	1	3.7	3.6
		36		36				2	7.4	7.2
24	8.3353		8.3354		1.6646	9.9999	76	3	11.1	10.8
25	8.3388	35	8.3389	35	1.6611	9.9999	75	4	14.8	14.4
26	8.3422	34	8.3423	34	1.6577	9.9999	74	5	18.5	18.0
		34		35				6	22.2	21.6
27	8.3456		8.3458		1.6542	9.9999	73	7	25.9	25.2
28	8.3491	35	8.3492	34	1.6508	9.9999	72	8	29.6	28.8
29	8.3524	33	8.3525	33	1.6475	9.9999	71	9	33.3	32.4
		34		34					35	34
30	8.3558		8.3559		1.6441	9.9999	70	1	3.5	3.4
		33		33				2	7.0	6.8
31	8.3591		8.3592		1.6408	9.9999	69	3	10.5	10.2
32	8.3624	33	8.3625	33	1.6375	9.9999	68	4	14.0	13.6
33	8.3657	33	8.3658	33	1.6342	9.9999	67	5	17.5	17.0
		32		33				6	21.0	20.4
34	8.3689		8.3691		1.6309	9.9999	66	7	24.5	23.8
35	8.3722	33	8.3723	32	1.6277	9.9999	65	8	28.0	27.2
36	8.3754	32	8.3755	32	1.6245	9.9999	64	9	31.5	30.6
		32		32					33	32
37	8.3786		8.3787		1.6213	9.9999	63	1	3.3	3.2
38	8.3817	31	8.3818	31	1.6182	9.9999	62	2	6.6	6.4
39	8.3848	31	8.3850	32	1.6150	9.9999	61	3	9.9	9.6
		32		31				4	13.2	12.8
40	8.3880		8.3881		1.6119	9.9999	60	5	16.5	16.0
		31		31				6	19.8	19.2
41	8.3911		8.3912		1.6088	9.9999	59	7	23.1	22.4
42	8.3941	30	8.3943	31	1.6057	9.9999	58	8	26.4	25.6
43	8.3972	31	8.3973	30	1.6027	9.9999	57	9	29.7	28.8
		30		30					31	29
44	8.4002		8.4003		1.5997	9.9999	56	1	3.1	2.9
45	8.4032	30	8.4033	30	1.5967	9.9999	55	2	6.2	5.8
46	8.4062	30	8.4063	30	1.5937	9.9999	54	3	9.3	8.7
		29		30				4	12.4	11.6
47	8.4091		8.4093		1.5907	9.9999	53	5	15.5	14.5
48	8.4121	30	8.4122	29	1.5878	9.9999	52	6	18.6	17.4
49	8.4150	29	8.4152	30	1.5848	9.9999	51	7	21.7	20.3
		29		29				8	24.8	23.2
50	8.4179		8.4181		1.5819	9.9999	50	9	27.9	26.1
	Lg. Cos.	d.	Lg. Cot.	d. c.	Lg. Tang.	Lg. Sin.	1/100			

1/100	Lg. Sin.	d.	Lg. Tang.	d. c.	Lg. Cot.	Lg. Cos.		P. P.
50	8.4179		8.4181		1.5819	9.9999	50	
51	8.4208	29	8.4210	29	1.5790	9.9998	49	29 28
52	8.4237	29	8.4238	28	1.5762	9.9998	48	1 2.9 2.8
53	8.4265	28	8.4267	29	1.5733	9.9998	47	2 5.8 5.6
		28		28				3 8.7 8.4
54	8.4293		8.4295		1.5705	9.9998	46	4 11.6 11.2
55	8.4322	29	8.4323	28	1.5677	9.9998	45	5 14.5 14.0
56	8.4349	27	8.4351	28	1.5649	9.9998	44	6 17.4 16.8
		28		28				7 20.3 19.6
57	8.4377		8.4379		1.5621	9.9998	43	8 23.2 22.4
58	8.4405	28	8.4406	27	1.5594	9.9998	42	9 26.1 25.2
59	8.4432	27	8.4434	28	1.5566	9.9998	41	
60	8.4459	27	8.4461	27	1.5539	9.9998	40	27
61	8.4486	27	8.4488	27	1.5512	9.9998	39	1 2.7
62	8.4513	27	8.4515	27	1.5485	9.9998	38	2 5.4
63	8.4540	27	8.4542	27	1.5458	9.9998	37	3 8.1
		27		26				4 10.8
64	8.4567		8.4568		1.5432	9.9998	36	5 13.5
65	8.4593	26	8.4595	27	1.5405	9.9998	35	6 16.2
66	8 4619	26	8.4621	26	1.5379	9.9998	34	7 18.9
		26		26				8 21.6
67	8.4645		8.4647		1.5353	9.9998	33	9 24.3
68	8.4671	26	8.4673	26	1.5327	9.9998	32	
69	8.4697	26	8.4699	26	1.5301	9.9998	31	26 25
70	8.4723	26	8.4725	26	1.5275	9.9998	30	1 2.6 2.5
71	8.4748	25	8.4750	25	1.5250	9.9998	29	2 5.2 5.0
72	8.4773	25	8.4775	25	1.5225	9.9998	28	3 7.8 7.5
73	8.4799	26	8.4801	26	1.5199	9.9998	27	4 10.4 10.0
		25		25				5 13.0 12.5
74	8.4824		8.4826		1.5174	9.9998	26	6 15.6 15.0
75	8.4848	24	8.4851	25	1.5149	9.9998	25	7 18.2 17.5
76	8.4873	25	8.4875	24	1.5125	9.9998	24	8 20.8 20.0
		25		25				9 23.4 22.5
77	8.4898		8.4900		1.5100	9.9998	23	
78	8.4922	24	8.4924	24	1.5076	9.9998	22	24
79	8.4947	25	8.4949	25	1.5051	9.9998	21	1 2.4
80	8.4971	24	8.4973	24	1.5027	9.9998	20	2 4.8
81	8.4995	24	8.4997	24	1.5003	9.9998	19	3 7.2
82	8.5019	24	8.5021	24	1.4979	9.9998	18	4 9.6
83	8.5043	24	8.5045	24	1.4955	9.9998	17	5 12.0
		23		23				6 14.4
84	8.5066		8.5068		1.4932	9.9998	16	7 16.8
85	8.5090	24	8.5092	24	1.4908	9.9998	15	8 19.2
86	8.5113	23	8.5115	23	1.4885	9.9998	14	9 21.6
		23		24				
87	8.5136		8.5139		1.4861	9.9998	13	23 22
88	8.5160	24	8.5162	23	1.4838	9.9998	12	1 2.3 2.2
89	8.5183	23	8.5185	23	1.4815	9.9998	11	2 4.6 4.4
		23		23				3 6.9 6.6
90	8.5206		8.5208		1.4792	9.9998	10	4 9.2 8.8
91	8.5228	22	8.5231	23	1.4769	9.9998	09	5 11.5 11.0
92	8.5251	23	8.5253	22	1.4747	9.9998	08	6 13.8 13.2
93	8.5274	23	8.5276	23	1.4724	9.9998	07	7 16.1 15.4
		22		22				8 18.4 17.6
94	8.5296		8.5298		1.4702	9.9998	06	9 20.7 19.8
95	8.5318	22	8.5321	23	1.4679	9.9997	05	
96	8.5340	22	8.5343	22	1.4657	9.9997	04	21
		23		22				1 2.1
97	8.5363		8.5365		1.4635	9 9997	03	2 4.2
98	8.5385	22	8.5387	22	1.4613	9 9997	02	3 6.3
99	8.5406	21	8 5409	22	1.4591	9.9997	01	4 8.4
		22		22				5 10.5
100	8.5428		8.5431		1.4569	9.9997	00	6 12.6
								7 14.7
	Lg. Cos.	d.	Lg. Cot.	d. c.	Lg. Tang.	Lg. Sin.	1/100	8 16.8
								9 18.9

1/100	Lg. Sin.	d.	Lg. Tang.	d. c.	Lg. Cot.	Lg. Cos.		P. P.
00	8.5428		8.5431		1.4569	9.9997	100	
01	8.5450	22	8.5453	22	1.4547	9.9997	99	22
02	8.5471	21	8.5474	21	1.4526	9.9997	98	1 2.2
03	8.5493	22	8.5496	22	1.4504	9.9997	97	2 4.4
		21		21				3 6.6
04	8.5514		8.5517		1.4483	9.9997	96	4 8.8
05	8.5535	21	8.5538	21	1.4462	9.9997	95	5 11.0
06	8.5557	22	8.5559	21	1.4441	9.9997	94	6 13.2
		21		21				7 15.4
07	8.5578		8.5580		1.4420	9.9997	93	8 17.6
08	8.5598	20	8.5601	21	1.4399	9.9997	92	9 19.8
09	8.5619	21	8.5622	21	1.4378	9.9997	91	
10	8.5640	21	8.5643	21	1.4357	9.9997	90	21
11	8.5661	21	8.5664	21	1.4336	9.9997	89	1 2.1
12	8.5681	20	8.5684	20	1.4316	9.9997	88	2 4.2
13	8.5702	21	8.5705	21	1.4295	9.9997	87	3 6.3
		20		20				4 8.4
14	8.5722		8.5725		1.4275	9.9997	86	5 10.5
15	8.5742	20	8.5745	20	1.4255	9.9997	85	6 12.6
16	8.5762	20	8.5765	20	1.4235	9.9997	84	7 14.7
		20		20				8 16.8
17	8.5782		8.5785		1.4215	9.9997	83	9 18.9
18	8.5802	20	8.5805	20	1.4195	9.9997	82	
19	8.5822	20	8.5825	20	1.4175	9.9997	81	20
20	8.5842	20	8.5845	20	1.4155	9.9997	80	1 2.0
21	8.5862	20	8.5865	20	1.4135	9.9997	79	2 4.0
22	8.5881	19	8.5884	19	1.4116	9.9997	78	3 6.0
23	8.5901	20	8.5904	20	1.4096	9.9997	77	4 8.0
		19		19				5 10.0
24	8.5920		8.5923		1.4077	9.9997	76	6 12.0
25	8.5939	19	8.5943	20	1.4057	9.9997	75	7 14.0
26	8.5959	20	8.5962	19	1.4038	9.9997	74	8 16.0
		19		19				9 18.0
27	8.5978		8.5981		1.4019	9.9997	73	19
28	8.5997	19	8.6000	19	1.4000	9.9997	72	1 1.9
29	8.6016	19	8.6019	19	1.3981	9.9997	71	2 3.8
		19		19				3 5.7
30	8.6035		8.6038		1.3962	9.9996	70	4 7.6
31	8.6054	19	8.6057	19	1.3943	9.9996	69	5 9.5
32	8.6072	18	8.6076	19	1.3924	9.9996	68	6 11.4
33	8.6091	19	8.6095	19	1.3905	9.9996	67	7 13.3
		19		18				8 15.2
34	8.6110		8.6113		1.3887	9.9996	66	9 17.1
35	8.6128	18	8.6132	19	1.3868	9.9996	65	
36	8.6147	19	8.6150	18	1.3850	9.9996	64	18
		18		19				1 1.8
37	8.6165		8.6169		1.3831	9.9996	63	2 3.6
38	8.6183	18	8.6187	18	1.3813	9.9996	62	3 5.4
39	8.6201	18	8.6205	18	1.3795	9.9996	61	4 7.2
		19		18				5 9.0
40	8.6220	18	8.6223	19	1.3777	9.9996	60	6 10.8
41	8.6238	18	8.6242	18	1.3758	9.9996	59	7 12.6
42	8.6256	18	8.6260	17	1.3740	9.9996	58	8 14.4
43	8.6274	17	8.6277	18	1.3723	9.9996	57	9 16.2
44	8.6291	18	8.6295	18	1.3705	9.9996	56	17
45	8.6309	18	8.6313	18	1.3687	9.9996	55	1 1.7
46	8.6327	17	8.6331	17	1.3669	9.9996	54	2 3.4
47	8.6344	18	8.6348	18	1.3652	9.9996	53	3 5.1
48	8.6362	17	8.6366	18	1.3634	9.9996	52	4 6.8
49	8.6379	18	8.6384	17	1.3616	9.9996	51	5 8.5
50	8.6397		8.6401		1.3599	9.9996	50	6 10.2
								7 11.9
								8 13.6
								9 15.3
	Lg. Cos.	d.	Lg. Cot.	d. c.	Lg. Tang.	Lg. Sin.	1/100	

1/100	Lg. Sin.	d.	Lg. Tang.	d. c.	Lg. Cot.	Lg. Cos.		P. P.
50	8.6397		8.6401		1.3599	9.9996	50	
51	8.6414	17	8.6418	17	1.3582	9.9996	49	
52	8.6431	17	8.6436	18	1.3564	9.9996	48	
53	8.6449	18	8.6453	17	1.3547	9.9996	47	18
54	8.6466	17	8.6470	17	1.3530	9.9996	46	1 1.8 2 3.6
55	8.6483	17	8.6487	17	1.3513	9.9996	45	3 5.4 4 7.2
56	8.6500	17	8.6504	17	1.3496	9.9996	44	5 9.0 6 10.8
57	8.6517	17	8.6521	17	1.3479	9.9996	43	7 12.6
58	8.6534	17	8.6538	17	1.3462	9.9996	42	8 14.4
59	8.6550	16	8.6555	17	1.3445	9.9996	41	9 16.2
60	8.6567	17	8.6571	16	1.3429	9.9996	40	
61	8.6584	17	8.6588	17	1.3412	9.9995	39	
62	8.6600	16	8.6605	17	1.3395	9.9995	38	
63	8.6617	17	8.6621	16	1.3379	9.9995	37	17
64	8.6633	16	8.6638	17	1.3362	9.9995	36	1 1.7 2 3.4
65	8.6650	17	8.6654	16	1.3346	9.9995	35	3 5.1 4 6.8
66	8.6666	16	8.6671	17	1.3329	9.9995	34	5 8.5 6 10.2
67	8.6682	16	8.6687	16	1.3313	9.9995	33	7 11.9
68	8.6699	17	8.6703	16	1.3297	9.9995	32	8 13.6
69	8.6715	16	8.6719	16	1.3281	9.9995	31	9 15.3
70	8.6731	16	8.6736	17	1.3264	9.9995	30	
71	8.6747	16	8.6752	16	1.3248	9.9995	29	
72	8.6763	16	8.6768	16	1.3232	9.9995	28	
73	8.6779	16	8.6784	16	1.3216	9.9995	27	16
74	8.6795	16	8.6800	16	1.3200	9.9995	26	1 1.6 2 3.2
75	8.6810	15	8.6815	15	1.3185	9.9995	25	3 4.8 4 6.4
76	8.6826	16	8.6831	16	1.3169	9.9995	24	5 8.0 6 9.6
77	8.6842	16	8.6847	16	1.3153	9.9995	23	7 11.2 8 12.8
78	8.6858	16	8.6863	16	1.3137	9.9995	22	9 14.4
79	8.6873	15	8.6878	15	1.3122	9.9995	21	
80	8.6889	16	8.6894	16	1.3106	9.9995	20	
81	8.6904	15	8.6909	15	1.3091	9.9995	19	
82	8.6920	16	8.6925	16	1.3075	9.9995	18	
83	8.6935	15	8.6940	15	1.3060	9.9995	17	15
84	8.6950	15	8.6956	16	1.3044	9.9995	16	1 1.5 2 3.0 3 4.5
85	8.6965	15	8.6971	15	1.3029	9.9995	15	4 6.0 5 7.5
86	8.6981	16	8.6986	15	1.3014	9.9995	14	6 9.0 7 10.5
87	8.6996	15	8.7001	15	1.2999	9.9995	13	8 12.0
88	8.7011	15	8.7016	15	1.2984	9.9995	12	9 13.5
89	8.7026	15	8.7031	15	1.2969	9.9994	11	
90	8.7041	15	8.7046	15	1.2954	9.9994	10	
91	8.7056	15	8.7061	15	1.2939	9.9994	09	
92	8.7071	15	8.7076	15	1.2924	9.9994	08	14
93	8.7086	15	8.7091	15	1.2909	9.9994	07	1 1.4 2 2.8
94	8.7100	14	8.7106	15	1.2894	9.9994	06	3 4.2 4 5.6
95	8.7115	15	8.7121	15	1.2879	9.9994	05	5 7.0 6 8.4
96	8.7130	15	8.7136	15	1.2864	9.9994	04	7 9.8 8 11.2
97	8.7144	14	8.7150	14	1.2850	9.9994	03	9 12.6
98	8.7159	15	8.7165	15	1.2835	9.9994	02	
99	8.7174	15	8.7179	14	1.2821	9.9994	01	
100	8.7188	14	8.7194	15	1.2806	9.9994	00	
	Lg. Cos.	d.	Lg. Cot.	d. c.	Lg. Tang.	Lg. Sin.	1/100	

1/100	Lg. Sin.	d.	Lg. Tang.	d. c.	Lg. Cot.	Lg. Cos.		P. P.
00	8.7188		8.7194		1.2806	9.9994	100	
01	8.7202	14	8.7208	14	1.2792	9.9994	99	
02	8.7217	15	8.7223	15	1.2777	9.9994	98	15
03	8.7231	14	8.7237	14	1.2763	9.9994	97	1 1.5
04	8.7245	14	8.7252	15	1.2748	9.9994	96	2 3.0
05	8.7260	15	8.7266	14	1.2734	9.9994	95	3 4.5
06	8.7274	14	8.7280	14	1.2720	9.9994	94	4 6.0
07	8.7288	14	8.7294	14	1.2706	9.9994	93	5 7.5
08	8.7302	14	8.7308	14	1.2692	9.9994	92	6 9.0
09	8.7316	14	8.7323	15	1.2677	9.9994	91	7 10.5
10	8.7330	14	8.7337	14	1.2663	9.9994	90	8 12.0
11	8.7344	14	8.7351	14	1.2649	9.9994	89	9 13.5
12	8.7358	14	8.7365	14	1.2635	9.9994	88	
13	8.7372	14	8.7379	14	1.2621	9.9994	87	
14	8.7386	14	8.7392	13	1.2608	9.9993	86	
15	8.7400	13	8.7406	14	1.2594	9.9993	85	14
16	8.7413	14	8.7420	14	1.2580	9.9993	84	1 1.4
17	8.7427	14	8.7434	14	1.2566	9.9993	83	2 2.8
18	8.7441	13	8.7448	13	1.2552	9.9993	82	3 4.2
19	8.7454	14	8.7461	14	1.2539	9.9993	81	4 5.6
20	8.7468	14	8.7475	13	1.2525	9.9993	80	5 7.0
21	8.7482	13	8.7488	14	1.2512	9.9993	79	6 8.4
22	8.7495	13	8.7502	13	1.2498	9 9993	78	7 9.8
23	8.7508	14	8.7515	14	1.2485	9.9993	77	8 11.2
24	8.7522	13	8.7529	13	1.2471	9.9993	76	9 12.6
25	8.7535	14	8.7542	14	1.2458	9.9993	75	
26	8.7549	13	8.7556	13	1.2444	9 9993	74	
27	8.7562	13	8.7569	13	1.2431	9.9993	73	13
28	8.7575	13	8.7582	14	1.2418	9.9993	72	1 1.3
29	8.7588	14	8.7596	13	1.2404	9.9993	71	2 2.6
30	8.7602	13	8.7609	13	1.2391	9.9993	70	3 3.9
31	8.7615	13	8.7622	13	1.2378	9.9993	69	4 5.2
32	8.7628	13	8.7635	13	1.2365	9.9993	68	5 6.5
33	8.7641	13	8.7648	13	1.2352	9.9993	67	6 7.8
34	8.7654	13	8.7661	13	1.2339	9.9993	66	7 9.1
35	8.7667	13	8.7674	13	1.2326	9.9993	65	8 10.4
36	8.7680	13	8.7687	13	1.2313	9.9993	64	9 11.7
37	8.7693	12	8.7700	13	1.2300	9.9992	63	
38	8.7705	13	8.7713	13	1.2287	9 9992	62	
39	8.7718	13	8.7726	13	1.2274	9.9992	61	
40	8.7731	13	8.7739	12	1.2261	9.9992	60	12
41	8.7744	12	8.7751	13	1.2249	9.9992	59	1 1.2
42	8.7756	13	8.7764	13	1.2236	9.9992	58	2 2.4
43	8.7769	13	8.7777	13	1.2223	9.9992	57	3 3.6
44	8.7782	12	8.7790	12	1.2210	9.9992	56	4 4.8
45	8.7794	13	8.7802	13	1.2198	9.9992	55	5 6.0
46	8.7807	12	8.7815	12	1.2185	9.9992	54	6 7.2
47	8.7819	13	8.7827	13	1.2173	9.9992	53	7 8.4
48	8.7832	12	8.7840	12	1.2160	9.9992	52	8 9.6
49	8.7844	13	8.7852	13	1.2148	9.9992	51	9 10.8
50	8.7857		8.7865		1.2135	9.9992	50	
	Lg. Cos.	d.	Lg. Cot.	d. c.	Lg. Tang.	Lg. Sin.	1/100	

1/100	Lg. Sin.	d.	Lg. Tang.	d. c.	Lg. Cot.	Lg. Cos.		P. P.
50	8.7857		8.7865		1.2135	9.9992	50	
51	8.7869	12	8.7877	12	1.2123	9.9992	49	
52	8.7881	12	8.7890	13	1.2110	9.9992	48	
53	8.7894	13	8.7902	12	1.2098	9.9992	47	13
54	8.7906	12	8.7914	12	1.2086	9.9992	46	1 1.3
55	8.7918	12	8.7927	13	1.2073	9.9992	45	2 2.6
56	8.7930	12	8.7939	12	1.2061	9.9992	44	3 3.9
57	8.7943	13	8.7951	12	1.2049	9.9992	43	4 5.2
58	8.7955	12	8.7963	12	1.2037	9.9992	42	5 6.5
59	8.7967	12	8.7975	12	1.2025	9.9991	41	6 7.8
60	8.7979	12	8.7988	13	1.2012	9.9991	40	7 9.1
61	8.7991	12	8.8000	12	1.2000	9.9991	39	8 10.4
62	8.8003	12	8.8012	12	1.1988	9.9991	38	9 11.7
63	8.8015	12	8.8024	12	1.1976	9.9991	37	
64	8.8027	12	8.8036	12	1.1964	9.9991	36	
65	8.8039	12	8.8048	12	1.1952	9.9991	35	12
66	8.8051	12	8.8059	11	1.1941	9.9991	34	1 1.2
67	8.8062	11	8.8071	12	1.1929	9.9991	33	2 2.4
68	8.8074	12	8.8083	12	1.1917	9.9991	32	3 3.6
69	8.8086	12	8.8095	12	1.1905	9.9991	31	4 4.8
70	8.8098	12	8.8107	12	1.1893	9.9991	30	5 6.0
71	8.8109	11	8.8119	12	1.1881	9.9991	29	6 7.2
72	8.8121	12	8.8130	11	1.1870	9.9991	28	7 8.4
73	8.8133	12	8.8142	12	1.1858	9.9991	27	8 9.6
74	8.8144	11	8.8154	12	1.1846	9.9991	26	9 10.8
75	8.8156	12	8.8165	11	1.1835	9.9991	25	
76	8.8168	12	8.8177	12	1.1823	9.9991	24	
77	8.8179	11	8.8188	11	1.1812	9.9991	23	11
78	8.8191	12	8.8200	12	1.1800	9.9991	22	1 1.1
79	8.8202	11	8.8212	12	1.1788	9.9990	21	2 2.2
80	8.8213	11	8.8223	11	1.1777	9.9990	20	3 3.3
81	8.8225	12	8.8234	11	1.1766	9.9990	19	4 4.4
82	8.8236	11	8.8246	12	1.1754	9.9990	18	5 5.5
83	8.8248	12	8.8257	11	1.1743	9.9990	17	6 6.6
84	8.8259	11	8.8269	12	1.1731	9.9990	16	7 7.7
85	8.8270	11	8.8280	11	1.1720	9.9990	15	8 8.8
86	8.8281	11	8.8291	11	1.1709	9.9990	14	9 9.9
87	8.8293	12	8.8302	11	1.1698	9.9990	13	
88	8.8304	11	8.8314	12	1.1686	9.9990	12	
89	8.8315	11	8.8325	11	1.1675	9.9990	11	
90	8.8326	11	8.8336	11	1.1664	9.9990	10	10
91	8.8337	11	8.8347	11	1.1653	9.9990	09	1 1.0
92	8.8348	11	8.8358	11	1.1642	9.9990	08	2 2.0
93	8.8359	11	8.8370	12	1.1630	9.9990	07	3 3.0
94	8.8370	11	8.8381	11	1.1619	9.9990	06	4 4.0
95	8.8381	11	8.8392	11	1.1608	9.9990	05	5 5.0
96	8.8392	11	8.8403	11	1.1597	9.9990	04	6 6.0
97	8.8403	11	8.8414	11	1.1586	9.9990	03	7 7.0
98	8.8414	11	8.8425	11	1.1575	9.9990	02	8 8.0
99	8.8425	11	8.8436	10	1.1564	9.9989	01	9 9.0
100	8.8436	11	8.8446		1.1554	9.9989	00	
	Lg. Cos.	d.	Lg. Cot.	d. c.	Lg. Tang.	Lg. Sin.	1/100	

1/100	Lg. Sin.	d.	Lg. Tang.	d. c.	Lg. Cot.	Lg. Cos.		P. P.
00	8.8436		8.8446		1.1554	9.9989	100	
		11		11				
01	8.8447		8.8457		1.1543	9.9989	99	
02	8.8457	10	8.8468	11	1.1532	9.9989	98	
03	8.8468	11	8.8479	11	1.1521	9.9989	97	
		11		11				
04	8.8479		8.8490		1.1510	9.9989	96	
05	8.8490	11	8.8501	11	1.1499	9.9989	95	
06	8.8500	10	8.8511	10	1.1489	9.9989	94	11
		11		11				1 1.1
07	8.8511		8.8522		1.1478	9.9989	93	2 2.2
08	8.8522	11	8.8533	11	1.1467	9.9989	92	3 3.3
09	8.8532	10	8.8543	10	1.1457	9.9989	91	4 4.4
		11		11				5 5.5
10	8.8543		8.8554		1.1446	9.9989	90	6 6.6
		10		11				7 7.7
11	8.8553		8.8565		1.1435	9.9989	89	8 8.8
12	8.8564	11	8.8575	10	1.1425	9.9989	88	9 9.9
13	8.8575	11	8.8586	11	1.1414	9.9989	87	
		10		10				
14	8.8585		8.8596		1.1404	9.9989	86	
15	8.8595	10	8.8607	11	1.1393	9.9989	85	
16	8.8606	11	8.8617	10	1.1383	9.9989	84	
		10		11				
17	8.8616		8.8628		1.1372	9.9988	83	
18	8.8627	11	8.8638	10	1.1362	9.9988	82	
19	8.8637	10	8.8649	11	1.1351	9.9988	81	
		10		10				
20	8.8647		8.8659		1.1341	9.9988	80	
		11		10				10
21	8.8658		8.8669		1.1331	9.9988	79	1 1.0
22	8.8668	10	8.8680	11	1.1320	9 9988	78	2 2.0
23	8.8678	10	8.8690	10	1.1310	9.9988	77	3 3.0
		10		10				4 4.0
24	8.8688		8.8700		1.1300	9.9988	76	5 5.0
25	8.8699	11	8.8711	11	1.1289	9.9988	75	6 6.0
26	8.8709	10	8.8721	10	1.1279	9.9988	74	7 7.0
		10		10				8 8.0
27	8.8719		8.8731		1.1269	9.9988	73	9 9.0
28	8.8729	10	8.8741	10	1.1259	9.9988	72	
29	8.8739	10	8.8751	10	1.1249	9.9988	71	
		10		11				
30	8.8749		8.8762		1.1238	9.9988	70	
		10		10				
31	8.8759		8.8772		1.1228	9.9988	69	
32	8.8769	10	8.8782	10	1.1218	9.9988	68	
33	8.8780	11	8.8792	10	1.1208	9.9988	67	
		10		10				
34	8.8790		8.8802		1.1198	9.9988	66	
35	8.8799	9	8.8812	10	1.1188	9.9987	65	
36	8.8809	10	8.8822	10	1.1178	9.9987	64	
		10		10				9
37	8.8819		8.8832		1.1168	9.9987	63	1 0.9
38	8.8829	10	8.8842	10	1.1158	9.9987	62	2 1.8
39	8.8839	10	8.8852	10	1.1148	9.9987	61	3 2.7
		10		10				4 3.6
40	8.8849		8.8862		1.1138	9.9987	60	5 4.5
		10		10				6 5.4
41	8.8859		8.8872		1.1128	9.9987	59	7 6.3
42	8.8869	10	8.8882	10	1.1118	9.9987	58	8 7.2
43	8.8878	9	8.8891	9	1.1109	9.9987	57	9 8.1
		10		10				
44	8.8888		8.8901		1.1099	9.9987	56	
45	8.8898	10	8.8911	10	1.1089	9.9987	55	
46	8.8908	10	8.8921	10	1.1079	9.9987	54	
		9		10				
47	8.8917		8.8931		1.1069	9.9987	53	
48	8.8927	10	8.8940	9	1.1060	9.9987	52	
49	8.8937	10	8.8950	10	1.1050	9.9987	51	
		9		10				
50	8.8946		8.8960		1.1040	9.9987	50	
	Lg. Cos.	d.	Lg. Cot.	d. c.	Lg. Tang.	Lg. Sin.	1/100	

‱	Lg. Sin.	d.	Lg. Tang.	d. c.	Lg. Cot.	Lg. Cos.		P. P.
50	8.8946		8.8960		1.1040	9.9987	50	
51	8.8956	10	8.8970	10	1.1030	9.9987	49	
52	8.8966	10	8.8979	9	1.1021	9.9986	48	
53	8.8975	9	8.8989	10	1.1011	9.9986	47	
54	8.8985	10	8.8998	9	1.1002	9.9986	46	
55	8.8994	9	8.9008	10	1.0992	9.9986	45	10
56	8.9004	10	8.9018	10	1.0982	9.9986	44	1 1.0
57	8.9013	9	8.9027	9	1.0973	9.9986	43	2 2.0
58	8.9023	10	8.9037	10	1.0963	9.9986	42	3 3.0
59	8.9032	9	8.9046	9	1.0954	9.9986	41	4 4.0
60	8.9042	10	8.9056	10	1.0944	9.9986	40	5 5.0
61	8.9051	9	8.9065	9	1.0935	9.9986	39	6 6.0
62	8.9060	9	8.9075	10	1.0925	9.9986	38	7 7.0
63	8.9070	10	8.9084	9	1.0916	9.9986	37	8 8.0
64	8.9079	9	8.9093	9	1.0907	9.9986	36	9 9.0
65	8.9089	10	8.9103	10	1.0897	9.9986	35	
66	8.9098	9	8.9112	9	1.0888	9.9986	34	
67	8.9107	9	8.9122	10	1.0878	9.9986	33	
68	8.9116	9	8.9131	9	1.0869	9.9985	32	
69	8.9126	10	8.9140	9	1.0860	9.9985	31	
70	8.9135	9	8.9150	10	1.0850	9.9985	30	
71	8.9144	9	8.9159	9	1.0841	9.9985	29	9
72	8.9153	9	8.9168	9	1.0832	9.9985	28	1 0.9
73	8.9162	9	8.9177	9	1.0823	9.9985	27	2 1.8
74	8.9172	10	8.9186	9	1.0814	9.9985	26	3 2.7
75	8.9181	9	8.9196	10	1.0804	9.9985	25	4 3.6
76	8.9190	9	8.9205	9	1.0795	9.9985	24	5 4.5
77	8.9199	9	8.9214	9	1.0786	9.9985	23	6 5.4
78	8.9208	9	8.9223	9	1.0777	9.9985	22	7 6.3
79	8.9217	9	8.9232	9	1.0768	9.9985	21	8 7.2
80	8.9226	9	8.9241	9	1.0759	9.9985	20	9 8.1
81	8.9235	9	8.9250	9	1.0750	9.9985	19	
82	8.9244	9	8.9260	10	1.0740	9.9985	18	
83	8.9253	9	8.9269	9	1.0731	9.9985	17	
84	8.9262	9	8.9278	9	1.0722	9.9984	16	
85	8.9271	9	8.9287	9	1.0713	9.9984	15	
86	8.9280	9	8.9296	9	1.0704	9.9984	14	
87	8.9289	9	8.9305	9	1.0695	9.9984	13	8
88	8.9298	9	8.9313	8	1.0687	9.9984	12	1 0.8
89	8.9307	9	8.9322	9	1.0678	9.9984	11	2 1.6
90	8.9315	8	8.9331	9	1.0669	9.9984	10	3 2.4
91	8.9324	9	8.9340	9	1.0660	9.9984	09	4 3.2
92	8.9333	9	8.9349	9	1.0651	9.9984	08	5 4.0
93	8.9342	9	8.9358	9	1.0642	9.9984	07	6 4.8
94	8.9351	9	8.9367	9	1.0633	9.9984	06	7 5.6
95	8.9359	8	8.9376	9	1.0624	9.9984	05	8 6.4
96	8.9368	9	8.9384	8	1.0616	9.9984	04	9 7.2
97	8.9377	9	8.9393	9	1.0607	9.9984	03	
98	8.9386	9	8.9402	9	1.0598	9.9984	02	
99	8.9394	8	8.9411	9	1.0589	9.9984	01	
100	8.9403	9	8.9420	9	1.0580	9.9983	00	
	Lg. Cos.	d.	Lg. Cot.	d. c.	Lg. Tang.	Lg. Sin.	‱	

1/100	Lg. Sin.	d.	Lg. Tang.	d. c.	Lg. Cot.	Lg. Cos.		P. P.
00	8.9403		8.9420		1.0580	9.9983	100	
01	8.9412	9	8.9428	8	1.0572	9.9983	99	
02	8.9420	8	8.9437	9	1.0563	9.9983	98	
03	8.9429	9	8.9446	9	1.0554	9.9983	97	
04	8.9437	8	8.9454	8	1.0546	9.9983	96	
05	8.9446	9	8.9463	9	1.0537	9.9983	95	
06	8.9455	9	8.9472	9	1.0528	9.9983	94	
07	8.9463	8	8.9480	8	1.0520	9.9983	93	
08	8.9472	9	8.9489	9	1.0511	9.9983	92	
09	8.9480	8	8.9497	8	1.0503	9.9983	91	
10	8.9489	9	8.9506	9	1.0494	9.9983	90	
11	8.9497	8	8.9515	9	1.0485	9.9983	89	9
12	8.9506	9	8.9523	8	1.0477	9.9983	88	1 0.9
13	8.9514	8	8.9532	9	1.0468	9.9983	87	2 1.8
14	8.9523	9	8.9540	8	1.0460	9.9983	86	3 2.7
15	8.9531	8	8.9549	9	1.0451	9.9982	85	4 3.6
16	8.9539	8	8.9557	8	1.0443	9.9982	84	5 4.5
17	8.9548	9	8.9565	8	1.0435	9.9982	83	6 5.4
18	8.9556	8	8.9574	9	1.0426	9.9982	82	7 6.3
19	8.9565	9	8.9582	8	1.0418	9.9982	81	8 7.2
20	8.9573	8	8.9591	9	1.0409	9.9982	80	9 8.1
21	8.9581	8	8.9599	8	1.0401	9.9982	79	
22	8.9589	8	8.9608	9	1.0392	9.9982	78	
23	8.9598	9	8.9616	8	1.0384	9.9982	77	
24	8.9606	8	8.9624	8	1.0376	9.9982	76	
25	8.9614	8	8.9633	9	1.0367	9.9982	75	
26	8.9623	9	8.9641	8	1.0359	9.9982	74	
27	8.9631	8	8.9649	8	1.0351	9.9982	73	
28	8.9639	8	8.9657	8	1.0343	9.9982	72	
29	8.9647	8	8.9666	9	1.0334	9.9981	71	
30	8.9655	9	8.9674	8	1.0326	9.9981	70	
31	8.9664	8	8.9682	8	1.0318	9.9981	69	8
32	8.9672	8	8.9690	8	1.0310	9.9981	68	1 0.8
33	8.9680	8	8.9699	9	1.0301	9.9981	67	2 1.6
34	8.9688	8	8.9707	8	1.0293	9.9981	66	3 2.4
35	8.9696	8	8.9715	8	1.0285	9.9981	65	4 3.2
36	8.9704	8	8.9723	8	1.0277	9.9981	64	5 4.0
37	8.9712	8	8.9731	8	1.0269	9.9981	63	6 4.8
38	8.9720	8	8.9739	8	1.0261	9.9981	62	7 5.6
39	8.9728	8	8.9747	9	1.0253	9.9981	61	8 6.4
40	8.9736	8	8.9756	8	1.0244	9 9981	60	9 7.2
41	8.9744	8	8.9764	8	1.0236	9.9981	59	
42	8.9752	8	8.9772	8	1.0228	9.9981	58	
43	8.9760	8	8.9780	8	1.0220	9.9980	57	
44	8.9768	8	8.9788	8	1.0212	9.9980	56	
45	8.9776	8	8.9796	8	1.0204	9.9980	55	
46	8.9784	8	8.9804	8	1.0196	9.9980	54	
47	8.9792	8	8.9812	8	1.0188	9.9980	53	
48	8.9800	8	8.9820	8	1.0180	9.9980	52	
49	8.9808	8	8.9828	8	1.0172	9.9980	51	
50	8.9816		8.9836		1.0164	9.9980	50	
	Lg. Cos.	d.	Lg. Cot.	d. c.	Lg. Tang.	Lg. Sin.	1/100	

1/100	Lg. Sin.	d.	Lg. Tang.	d. c.	Lg. Cot.	Lg. Cos.		P. P.
50	8.9816	8	8.9836	8	1.0164	9.9980	50	
51	8.9824	7	8.9844	8	1.0156	9.9980	49	
52	8.9831	8	8.9852	8	1.0148	9.9980	48	
53	8.9839	8	8.9860	7	1.0140	9.9980	47	
54	8.9847	8	8.9867	8	1.0133	9.9980	46	
55	8.9855	8	8.9875	8	1.0125	9.9980	45	
56	8.9863	7	8.9883	8	1.0117	9.9980	44	
57	8.9870	8	8.9891	8	1.0109	9.9979	43	
58	8.9878	8	8.9899	8	1.0101	9.9979	42	
59	8.9886	8	8.9907	8	1.0093	9.9979	41	
60	8.9894	7	8.9915	7	1.0085	9.9979	40	8
61	8.9901	8	8.9922	8	1.0078	9.9979	39	1 0.8
62	8.9909	8	8.9930	8	1.0070	9.9979	38	2 1.6
63	8.9917	8	8.9938	8	1.0062	9.9979	37	3 2.4
64	8.9925	7	8.9946	7	1.0054	9.9979	36	4 3.2
65	8.9932	8	8.9953	8	1.0047	9.9979	35	5 4.0
66	8.9940	8	8.9961	8	1.0039	9.9979	34	6 4.8
67	8.9948	7	8.9969	8	1.0031	9.9979	33	7 5.6
68	8.9955	8	8.9977	7	1.0023	9.9979	32	8 6.4
69	8.9963	7	8.9984	8	1.0016	9.9979	31	9 7.2
70	8.9970	8	8.9992	8	1.0008	9.9978	30	
71	8.9978	8	9.0000	7	1.0000	9.9978	29	
72	8.9986	7	9.0007	8	0.9993	9.9978	28	
73	8.9993	8	9.0015	7	0.9985	9.9978	27	
74	9.0001	7	9.0022	8	0.9978	9.9978	26	
75	9.0008	8	9.0030	8	0.9970	9.9978	25	
76	9.0016	7	9.0038	7	0.9962	9.9978	24	
77	9.0023	8	9.0045	8	0.9955	9.9978	23	
78	9.0031	7	9.0053	7	0.9947	9.9978	22	
79	9.0038	8	9.0060	8	0.9940	9.9978	21	
80	9.0046	7	9.0068	7	0.9932	9.9978	20	
81	9.0053	8	9.0075	8	0.9925	9.9978	19	7
82	9.0061	7	9.0083	7	0.9917	9.9978	18	1 0.7
83	9.0068	7	9.0090	8	0.9910	9.9977	17	2 1.4
84	9.0075	8	9.0098	7	0.9902	9.9977	16	3 2.1
85	9.0083	7	9.0105	8	0.9895	9.9977	15	4 2.8
86	9.0090	8	9.0113	7	0.9887	9.9977	14	5 3.5
87	9.0098	7	9.0120	8	0.9880	9.9977	13	6 4.2
88	9.0105	7	9.0128	7	0.9872	9.9977	12	7 4.9
89	9.0112	8	9.0135	8	0.9865	9.9977	11	8 5.6
90	9.0120	7	9.0143	7	0.9857	9.9977	10	9 6.3
91	9.0127	7	9.0150	7	0.9850	9.9977	09	
92	9.0134	8	9.0157	8	0.9843	9.9977	08	
93	9.0142	7	9.0165	7	0.9835	9.9977	07	
94	9.0149	7	9.0172	8	0.9828	9.9977	06	
95	9.0156	7	9.0180	7	0.9820	9.9977	05	
96	9.0163	8	9.0187	7	0.9813	9.9976	04	
97	9.0171	7	9.0194	8	0.9806	9.9976	03	
98	9.0178	7	9.0202	7	0.9798	9.9976	02	
99	9.0185	7	9.0209	7	0.9791	9.9976	01	
100	9.0192		9.0216		0.9784	9.9976	00	
	Lg. Cos.	d.	Lg. Cot.	d. c.	Lg. Tang.	Lg. Sin.	1/100	

′/100	Lg. Sin.	d.	Lg. Tang.	d. c.	Lg. Cot.	Lg. Cos.		P. P.
00	9.0192		9.0216		0.9784	9.9976	100	
		8		7				
01	9.0200		9.0223		0.9777	9.9976	99	
		7		8				
02	9.0207		9.0231		0.9769	9.9976	98	
		7		7				
03	9.0214		9.0238		0.9762	9.9976	97	
		7		7				
04	9.0221		9.0245		0.9755	9.9976	96	
		7		8				
05	9.0228		9.0253		0.9747	9.9976	95	
		7		7				
06	9.0235		9.0260		0.9740	9.9976	94	
		8		7				8
07	9.0243		9.0267		0.9733	9.9976	93	1 0.8
		7		7				2 1.6
08	9.0250		9.0274		0.9726	9.9976	92	3 2.4
		7		7				4 3.2
09	9.0257		9.0281		0.9719	9.9975	91	5 4.0
		7		8				6 4.8
10	9.0264		9.0289		0.9711	9.9975	90	7 5.6
		7		7				8 6.4
11	9.0271		9.0296		0.9704	9.9975	89	9 7.2
		7		7				
12	9.0278		9.0303		0.9697	9.9975	88	
		7		7				
13	9.0285		9.0310		0.9690	9.9975	87	
		7		7				
14	9.0292		9.0317		0.9683	9.9975	86	
		7		7				
15	9.0299		9.0324		0.9676	9.9975	85	
		7		7				
16	9.0306		9.0331		0.9669	9.9975	84	
		7		7				
17	9.0313		9.0338		0.9662	9.9975	83	
		7		8				
18	9.0320		9.0346		0.9654	9.9975	82	
		7		7				
19	9.0327		9.0353		0.9647	9.9975	81	
		7		7				
20	9.0334		9.0360		0.9640	9.9975	80	
		7		7				7
21	9.0341		9.0367		0.9633	9.9974	79	1 0.7
		7		7				2 1.4
22	9.0348		9.0374		0.9626	9.9974	78	3 2.1
		7		7				4 2.8
23	9.0355		9.0381		0.9619	9.9974	77	5 3.5
		7		7				6 4.2
24	9.0362		9.0388		0.9612	9.9974	76	7 4.9
		7		7				8 5.6
25	9.0369		9.0395		0.9605	9.9974	75	9 6.3
		7		7				
26	9.0376		9.0402		0.9598	9.9974	74	
		7		7				
27	9.0383		9.0409		0.9591	9.9974	73	
		7		7				
28	9.0390		9.0416		0.9584	9.9974	72	
		7		7				
29	9.0397		9.0423		0.9577	9.9974	71	
		6		7				
30	9.0403		9.0430		0.9570	9.9974	70	
		7		7				
31	9.0410		9.0437		0.9563	9.9974	69	
		7		7				
32	9.0417		9.0444		0.9556	9.9974	68	
		7		7				
33	9.0424		9.0451		0.9549	9.9973	67	
		7		6				
34	9.0431		9.0457		0.9543	9.9973	66	
		7		7				
35	9.0438		9.0464		0.9536	9.9973	65	
		6		7				
36	9.0444		9.0471		0.9529	9.9973	64	
		7		7				6
37	9.0451		9.0478		0.9522	9.9973	63	1 0.6
		7		7				2 1.2
38	9.0458		9.0485		0.9515	9.9973	62	3 1.8
		7		7				4 2.4
39	9.0465		9.0492		0.9508	9.9973	61	5 3.0
		7		7				6 3.6
40	9.0472		9.0499		0.9501	9.9973	60	7 4.2
		6		7				8 4.8
41	9.0478		9.0506		0.9494	9.9973	59	9 5.4
		7		6				
42	9.0485		9.0512		0.9488	9.9973	58	
		7		7				
43	9.0492		9.0519		0.9481	9.9973	57	
		6		7				
44	9.0498		9.0526		0.9474	9.9973	56	
		7		6				
45	9.0505		9.0533		0.9467	9.9972	55	
		7		7				
46	9.0512		9.0540		0.9460	9.9972	54	
		7		6				
47	9.0519		9.0546		0.9454	9.9972	53	
		6		7				
48	9.0525		9.0553		0.9447	9.9972	52	
		7		7				
49	9.0532		9.0560		0.9440	9.9972	51	
		7		7				
50	9.0539		9.0567		0.9433	9.9972	50	
	Lg. Cos.	d.	Lg. Cot.	d. c.	Lg. Tang.	Lg. Sin	′/100	

1/100	Lg. Sin.	d.	Lg. Tang.	d. c.	Lg. Cot.	Lg. Cos.		P. P.
50	9.0539	6	9.0567	6	0.9433	9.9972	50	
51	9.0545	7	9.0573	7	0.9427	9.9972	49	
52	9.0552	6	9.0580	7	0.9420	9.9972	48	
53	9.0558	7	9.0587	6	0.9413	9.9972	47	
54	9.0565	7	9.0593	7	0.9407	9.9972	46	
55	9.0572	6	9.0600	7	0.9400	9.9972	45	
56	9.0578	7	9.0607	7	0.9393	9.9971	44	
57	9.0585	6	9.0614	6	0.9386	9.9971	43	
58	9.0591	7	9.0620	7	0.9380	9.9971	42	
59	9.0598	7	9.0627	6	0.9373	9.9971	41	
60	9.0605	6	9.0633	7	0.9367	9.9971	40	
61	9.0611	7	9.0640	7	0.9360	9.9971	39	7
62	9.0618	6	9.0647	6	0.9353	9.9971	38	1 | 0.7
63	9.0624	7	9.0653	7	0.9347	9.9971	37	2 | 1.4
64	9.0631	6	9.0660	7	0.9340	9.9971	36	3 | 2.1
65	9.0637	7	9.0667	6	0.9333	9.9971	35	4 | 2.8
66	9.0644	6	9.0673	7	0.9327	9.9971	34	5 | 3.5
67	9.0650	7	9.0680	6	0.9320	9.9971	33	6 | 4.2
68	9.0657	6	9.0686	7	0.9314	9.9970	32	7 | 4.9
69	9.0663	7	9.0693	6	0.9307	9.9970	31	8 | 5.6
70	9.0670	6	9.0699	7	0.9301	9.9970	30	9 | 6.3
71	9.0676	7	9.0706	6	0.9294	9.9970	29	
72	9.0683	6	9.0712	7	0.9288	9.9970	28	
73	9.0689	6	9.0719	6	0.9281	9.9970	27	
74	9.0695	7	9.0725	7	0.9275	9.9970	26	
75	9.0702	6	9.0732	6	0.9268	9.9970	25	
76	9.0708	7	9.0738	7	0.9262	9.9970	24	
77	9.0715	6	9.0745	6	0.9255	9.9970	23	
78	9.0721	6	9.0751	7	0.9249	9.9970	22	
79	9.0727	7	9.0758	6	0.9242	9.9969	21	
80	9.0734	6	9.0764	7	0.9236	9.9969	20	
81	9.0740	6	9.0771	6	0.9229	9.9969	19	6
82	9.0746	7	9.0777	7	0.9223	9.9969	18	1 | 0.6
83	9.0753	6	9.0784	6	0.9216	9.9969	17	2 | 1.2
84	9.0759	6	9.0790	6	0.9210	9.9969	16	3 | 1.8
85	9.0765	7	9.0796	7	0.9204	9.9969	15	4 | 2.4
86	9.0772	6	9.0803	6	0.9197	9.9969	14	5 | 3.0
87	9.0778	6	9.0809	7	0.9191	9.9969	13	6 | 3.6
88	9.0784	6	9.0816	6	0.9184	9.9969	12	7 | 4.2
89	9.0790	7	9.0822	6	0.9178	9.9969	11	8 | 4.8
90	9.0797	6	9.0828	7	0.9172	9.9968	10	9 | 5.4
91	9.0803	6	9.0835	6	0.9165	9.9968	09	
92	9.0809	7	9.0841	6	0.9159	9.9968	08	
93	9.0816	6	9.0847	7	0.9153	9.9968	07	
94	9.0822	6	9.0854	6	0.9146	9.9968	06	
95	9.0828	6	9.0860	6	0.9140	9.9968	05	
96	9.0834	6	9.0866	7	0.9134	9.9968	04	
97	9.0840	7	9.0873	6	0.9127	9.9968	03	
98	9.0847	6	9.0879	6	0.9121	9.9968	02	
99	9.0853	6	9.0885	6	0.9115	9.9968	01	
100	9.0859		9.0891		0.9109	9.9968	00	
	Lg. Cos.	d.	Lg. Cot.	d. c.	Lg. Tang	Lg. Sin.	1/100	

1/100	Lg. Sin.	d.	Lg. Tang.	d. c.	Lg. Cot.	Lg. Cos.		P. P.
00	9.0859		9.0891		0.9109	9.9968	100	
01	9.0865	6	9.0898	7	0.9102	9.9967	99	
02	9.0871	6	9.0904	6	0.9096	9.9967	98	
03	9.0877	6	9.0910	6	0.9090	9.9967	97	
04	9.0884	7	9.0916		0.9084	9.9967	96	
05	9.0890	6	9.0923	7	0.9077	9.9967	95	
06	9.0896	6	9.0929	6	0.9071	9.9967	94	7
07	9.0902	6	9.0935	6	0.9065	9.9967	93	1 0.7
08	9.0908	6	9.0941	6	0.9059	9.9967	92	2 1.4
09	9.0914	6	9.0947	7	0.9053	9.9967	91	3 2.1
10	9.0920	6	9.0954	6	0.9046	9.9967	90	4 2.8
11	9.0926	6	9.0960	6	0.9040	9.9966	89	5 3.5
12	9.0932	6	9.0966	6	0.9034	9.9966	88	6 4.2
13	9.0938	7	9.0972	6	0.9028	9.9966	87	7 4.9
14	9.0945	6	9.0978	6	0.9022	9.9966	86	8 5.6
15	9.0951	6	9.0984	6	0.9016	9.9966	85	9 6.3
16	9.0957	6	9.0991	7	0.9009	9.9966	84	
17	9.0963	6	9.0997	6	0.9003	9.9966	83	
18	9.0969	6	9.1003	6	0.8997	9.9966	82	
19	9.0975	6	9.1009	6	0.8991	9.9966	81	
20	9.0981	6	9.1015	6	0.8985	9.9966	80	
21	9.0987	6	9.1021	6	0.8979	9.9966	79	6
22	9.0993	6	9.1027	6	0.8973	9.9965	78	1 0.6
23	9.0999	6	9.1033	6	0.8967	9.9965	77	2 1.2
24	9.1005	6	9.1039	6	0.8961	9.9965	76	3 1.8
25	9.1011	6	9.1045	6	0.8955	9.9965	75	4 2.4
26	9.1017	5	9.1051	7	0.8949	9.9965	74	5 3.0
27	9.1022	6	9.1058	6	0.8942	9.9965	73	6 3.6
28	9.1028	6	9.1064	6	0.8936	9.9965	72	7 4.2
29	9.1034	6	9.1070	6	0.8930	9.9965	71	8 4.8
30	9.1040	6	9.1076	6	0.8924	9.9965	70	9 5.4
31	9.1046	6	9.1082	6	0.8918	9.9965	69	
32	9.1052	6	9.1088	6	0.8912	9.9964	68	
33	9.1058	6	9.1094	6	0.8906	9.9964	67	
34	9.1064	6	9.1100	6	0.8900	9.9964	66	
35	9.1070	6	9.1106	6	0.8894	9.9964	65	
36	9.1076	5	9.1112	5	0.8888	9.9964	64	5
37	9.1081	6	9.1117	6	0.8883	9.9964	63	1 0.5
38	9.1087	6	9.1123	6	0.8877	9.9964	62	2 1.0
39	9.1093	6	9.1129	6	0.8871	9.9964	61	3 1.5
40	9.1099	6	9.1135	6	0.8865	9.9964	60	4 2.0
41	9.1105	6	9.1141	6	0.8859	9.9964	59	5 2.5
42	9.1111	6	9.1147	6	0.8853	9.9963	58	6 3.0
43	9.1116	5	9.1153	6	0.8847	9.9963	57	7 3.5
44	9.1122	6	9.1159	6	0.8841	9.9963	56	8 4.0
45	9.1128	6	9.1165	6	0.8835	9.9963	55	9 4.5
46	9.1134	6	9.1171	6	0.8829	9.9963	54	
47	9.1140	5	9.1177	6	0.8823	9.9963	53	
48	9.1145	6	9.1183	6	0.8817	9.9963	52	
49	9.1151	6	9.1188	5	0.8812	9.9963	51	
50	9.1157		9.1194	6	0.8806	9.9963	50	
	Lg. Cos.	d.	Lg. Cot.	d. c.	Lg. Tang.	Lg. Sin.	1/100	

1/100	Lg. Sin.	d.	Lg. Tang.	d. c.	Lg. Cot.	Lg. Cos.		P. P.
50	9.1157	6	9.1194	6	0.8806	9.9963	50	
51	9.1163	5	9.1200	6	0.8800	9.9963	49	
52	9.1168	6	9.1206	6	0.8794	9.9962	48	
53	9.1174	6	9.1212	6	0.8788	9.9962	47	
54	9.1180	6	9.1218	5	0.8782	9.9962	46	
55	9.1186	5	9.1223	6	0.8777	9.9962	45	
56	9.1191	6	9.1229	6	0.8771	9.9962	44	
57	9.1197	6	9.1235	6	0.8765	9.9962	43	
58	9.1203	5	9.1241	6	0.8759	9.9962	42	
59	9.1208	6	9.1247	5	0.8753	9.9962	41	
60	9.1214	6	9.1252	6	0.8748	9.9962	40	
61	9.1220	6	9.1258	6	0.8742	9.9962	39	6
62	9.1226	5	9.1264	6	0.8736	9.9961	38	1 0.6
63	9.1231	6	9.1270	6	0.8730	9.9961	37	2 1.2
64	9.1237	5	9.1276	5	0.8724	9.9961	36	3 1.8
65	9.1242	6	9.1281	6	0.8719	9.9961	35	4 2.4
66	9.1248	6	9.1287	6	0.8713	9.9961	34	5 3.0
67	9.1254	5	9.1293	6	0.8707	9.9961	33	6 3.6
68	9.1259	6	9.1299	5	0.8701	9.9961	32	7 4.2
69	9.1265	6	9 1304	6	0.8696	9.9961	31	8 4.8
70	9.1271	5	9.1310	6	0.8690	9.9961	30	9 5.4
71	9.1276	6	9.1316	5	0.8684	9.9961	29	
72	9.1282	5	9.1321	6	0.8679	9.9960	28	
73	9.1287	6	9.1327	6	0.8673	9.9960	27	
74	9.1293	6	9.1333	5	0.8667	9.9960	26	
75	9.1299	5	9.1338	6	0.8662	9.9960	25	
76	9.1304	6	9.1344	6	0.8656	9.9960	24	
77	9.1310	5	9.1350	5	0.8650	9.9960	23	
78	9.1315	6	9 1355	6	0.8645	9.9960	22	
79	9.1321	5	9.1361	6	0.8639	9.9960	21	
80	9.1326	6	9.1367	5	0.8633	9.9960	20	
81	9.1332	5	9.1372	6	0.8628	9.9960	19	5
82	9.1337	6	9.1378	6	0.8622	9.9959	18	1 0.5
83	9.1343	5	9.1384	5	0.8616	9.9959	17	2 1.0
84	9.1348	6	9.1389	6	0.8611	9.9959	16	3 1.5
85	9.1354	5	9.1395	5	0.8605	9.9959	15	4 2.0
86	9.1359	6	9.1400	6	0.8600	9.9959	14	5 2.5
87	9.1365	5	9.1406	6	0.8594	9.9959	13	6 3.0
88	9.1370	6	9.1412	5	0.8588	9.9959	12	7 3.5
89	9.1376	5	9.1417	6	0.8583	9.9959	11	8 4.0
90	9.1381	6	9.1423	5	0.8577	9.9959	10	9 4.5
91	9.1387	5	9.1428	6	0.8572	9.9958	09	
92	9.1392	6	9.1434	5	0.8566	9.9958	08	
93	9.1398	5	9.1439	6	0.8561	9.9958	07	
94	9.1403	6	9.1445	5	0.8555	9.9958	06	
95	9.1409	5	9.1450	6	0.8550	9.9958	05	
96	9.1414	5	9.1456	5	0.8544	9.9958	04	
97	9.1419	6	9.1461	6	0.8539	9.9958	03	
98	9.1425	5	9.1467	6	0.8533	9.9958	02	
99	9.1430	6	9.1473	5	0.8527	9.9958	01	
100	9.1436		9.1478		0.8522	9.9958	00	
	Lg. Cos.	d.	Lg. Cot.	d. c.	Lg. Tang.	Lg. Sin.	1/100	

Grade	Lg. Sin.	d.	Lg. Tg.	d. c.	Lg. Cot.	Lg. Cos.	d.
5.0	8.9403	86	8.9420	86	1.0580	9.9983	0
1	8.9489	84	8.9506	85	1.0494	9.9983	1
2	8.9573	82	8.9591	83	1.0409	9.9982	1
3	8.9655	81	8.9674	82	1.0326	9.9981	0
4	8.9736	80	8.9756	80	1.0244	9.9981	1
5	8.9816	78	8.9836	79	1.0164	9.9980	1
6	8.9894	76	8.9915	77	1.0085	9.9979	1
7	8.9970	76	8.9992	76	1.0008	9.9978	0
8	9.0046	74	9.0068	75	0.9932	9.9978	1
9	9.0120	72	9.0143	73	0.9857	9.9977	1
6.0	9.0192	72	9.0216	73	0.9784	9.9976	1
1	9.0264	70	9.0289	71	0.9711	9.9975	0
2	9.0334	69	9.0360	70	0.9640	9.9975	1
3	9.0403	69	9.0430	69	0.9570	9.9974	1
4	9.0472	67	9.0499	68	0.9501	9.9973	1
5	9.0539	66	9.0567	66	0.9433	9.9972	1
6	9.0605	65	9.0633	66	0.9367	9.9971	1
7	9.0670	64	9.0699	65	0.9301	9.9970	1
8	9.0734	63	9.0764	64	0.9236	9.9969	1
9	9.0797	62	9.0828	63	0.9172	9.9968	0
7.0	9.0859	61	9.0891	63	0.9109	9.9968	1
1	9.0920	61	9.0954	61	0.9046	9.9967	1
2	9.0981	59	9.1015	61	0.8985	9.9966	1
3	9.1040	59	9.1076	59	0.8924	9.9965	1
4	9.1099	58	9.1135	59	0.8865	9.9964	1
5	9.1157	57	9.1194	58	0.8806	9.9963	1
6	9.1214	57	9.1252	58	0.8748	9.9962	1
7	9.1271	55	9.1310	57	0.8690	9.9961	1
8	9.1326	55	9.1367	56	0.8633	9.9960	1
9	9.1381	55	9.1423	55	0.8577	9.9959	1
8.0	9.1436	53	9.1478	55	0.8522	9.9958	2
1	9.1489	53	9.1533	54	0.8467	9.9956	1
2	9.1542	52	9.1587	53	0.8413	9.9955	1
3	9.1594	52	9.1640	53	0.8360	9.9954	1
4	9.1646	51	9.1693	52	0.8307	9.9953	1
5	9.1697	50	9.1745	52	0.8255	9.9952	1
6	9.1747	50	9.1797	51	0.8203	9.9951	1
7	9.1797	50	9.1848	50	0.8152	9.9950	1
8	9.1847	48	9.1898	50	0.8102	9.9949	2
9	9.1895	48	9.1948	49	0.8052	9.9947	1
9.0	9.1943	48	9.1997	49	0.8003	9.9946	1
1	9.1991	47	9.2046	48	0.7954	9.9945	1
2	9.2038	47	9.2094	48	0.7906	9.9944	1
3	9.2085	46	9.2142	47	0.7858	9.9943	2
4	9.2131	45	9.2189	47	0.7811	9.9941	1
5	9.2176	45	9.2236	46	0.7764	9.9940	1
6	9.2221	45	9.2282	46	0.7718	9.9939	2
7	9.2266	44	9.2328	46	0.7672	9.9937	1
8	9.2310	43	9.2374	45	0.7626	9.9936	1
9	9.2353	44	9.2419	44	0.7581	9.9935	1
10.0	9.2397		9.2463		0.7537	9.9934	
	Lg. Cos.	d.	Cot. Lg.	d. c.	Lg. Tg.	Lg. Sin.	d.

Grade	P. P.		
85.0	62	61	60
9	6.2	6.1	6.0
8	12.4	12.2	12.0
7	18.6	18.3	18.0
6	24.8	24.4	24.0
5	31.0	30.5	30.0
4	37.2	36.6	36.0
3	43.4	42.7	42.0
2	49.6	48.8	48.0
1	55.8	54.9	54.0
84.0	59	58	57
9	5.9	5.8	5.7
8	11.8	11.6	11.4
7	17.7	17.4	17.1
6	23.6	23.2	22.8
5	29.5	29.0	28.5
4	35.4	34.8	34.2
3	41.3	40.6	39.9
2	47.2	46.4	45.6
1	53.1	52.2	51.3
83.0	56	55	54
9	5.6	5.5	5.4
8	11.2	11.0	10.8
7	16.8	16.5	16.2
6	22.4	22.0	21.6
5	28.0	27.5	27.0
4	33.6	33.0	32.4
3	39.2	38.5	37.8
2	44.8	44.0	43.2
1	50.4	49.5	48.6
82.0	53	52	51
9	5.3	5.2	5.1
8	10.6	10.4	10.2
7	15.9	15.6	15.3
6	21.2	20.8	20.4
5	26.5	26.0	25.5
4	31.8	31.2	30.6
3	37.1	36.4	35.7
2	42.4	41.6	40.8
1	47.7	46.8	45.9
81.0	50	49	48
9	5.0	4.9	4.8
8	10.0	9.8	9.6
7	15.0	14.7	14.4
6	20.0	19.6	19.2
5	25.0	24.5	24.0
4	30.0	29.4	28.8
3	35.0	34.3	33.6
2	40.0	39.2	38.4
1	45.0	44.1	43.2
80.0	47	46	45
9	4.7	4.6	4.5
8	9.4	9.2	9.0
7	14.1	13.8	13.5
6	18.8	18.4	18.0
5	23.5	23.0	22.5
4	28.2	27.6	27.0
3	32.9	32.2	31.5
2	37.6	36.8	36.0
1	42.3	41.4	40.5
	44	43	42
9	4.4	4.3	4.2
8	8.8	8.6	8.4
7	13.2	12.9	12.6
6	17.6	17.2	16.8
5	22.0	21.5	21.0
4	26.4	25.8	25.2
3	30.8	30.1	29.4
2	35.2	34.5	33.6
1	39.6	38.8	37.8
Grade			

Grade	Lg. Sin.	d.	Lg. Tg.	d. c.	Lg. Cot.	Lg. Cos.	d.		P. P.	
10.0	9.2397	42	9.2463	44	0.7537	9.9934	2	80.0	41	40
1	9.2439	43	9.2507	44	0.7493	9.9932	1	9	1 4.1	4.0
2	9.2482	42	9.2551	43	0.7449	9.9931	2	8	2 8.2	8.0
3	9.2524	41	9.2594	43	0.7406	9.9929	1	7	3 12.3	12.0
4	9.2565	41	9.2637	43	0.7363	9.9928	1	6	4 16.4	16.0
5	9.2606	41	9.2680	43	0.7320	9.9927	2	5	5 20.5	20.0
6	9.2647	40	9.2722	42	0.7278	9.9925	1	4	6 24.6	24.0
7	9.2687	40	9.2764	42	0.7236	9.9924	2	3	7 28.7	28.0
8	9.2727	40	9.2805	41	0.7195	9.9922	1	2	8 32.8	32.0
9	9.2767	39	9.2846	41	0.7154	9.9921	2	1	9 36.9	36.0
11.0	9.2806	39	9.2887	41	0.7113	9.9919	1	79.0	39	38
1	9.2845	38	9.2927	40	0.7073	9.9918	2	9	1 3.9	3.8
2	9.2883	38	9.2967	40	0.7033	9.9916	1	8	2 7.8	7.6
3	9.2921	38	9.3006	39	0.6994	9.9915	2	7	3 11.7	11.4
4	9 2959	38	9.3046	40	0 6954	9.9913	1	6	4 15.6	15.2
5	9.2997	37	9.3085	39	0.6915	9.9912	2	5	5 19.5	19.0
6	9.3034	36	9.3123	38	0.6877	9.9910	1	4	6 23.4	22.8
7	9.3070	37	9.3162	39	0.6838	9.9909	2	3	7 27.3	26.6
8	9.3107	36	9.3200	38	0.6800	9.9907	1	2	8 31.2	30.4
9	9.3143	36	9.3237	37	0.6763	9.9906	2	1	9 35.1	34.2
12.0	9.3179	35	9.3275	38	0.6725	9.9904	2	78.0	37	36
1	9.3214	36	9.3312	37	0.6688	9.9902	1	9	1 3.7	3.6
2	9.3250	34	9.3349	37	0.6651	9.9901	2	8	2 7.4	7.2
3	9.3284	35	9.3385	36	0.6615	9.9899	2	7	3 11.1	10.8
4	9.3319	34	9.3422	37	0.6578	9.9897	1	6	4 14.8	14.4
5	9.3353	34	9.3458	36	0.6542	9.9896	2	5	5 18.5	18.0
6	9.3387	34	9.3493	35	0.6507	9.9894	2	4	6 22.2	21.6
7	9.3421	34	9.3529	36	0.6471	9.9892	1	3	7 25.9	25.2
8	9.3455	34	9.3564	35	0.6436	9.9891	2	2	8 29.6	28.8
9	9.3488	33	9.3599	35	0.6401	9.9889	2	1	9 33.3	32.4
13.0	9.3521	33	9.3634	35	0.6366	9.9887	2	77.0	35	34
1	9.3554	33	9.3668	34	0.6332	9.9885	2	9	1 3.5	3.4
2	9.3586	32	9.3702	34	0.6298	9.9884	1	8	2 7.0	6.8
3	9.3618	32	9.3736	34	0.6264	9.9882	2	7	3 10.5	10.2
4	9.3650	32	9.3770	34	0.6230	9.9880	2	6	4 14.0	13.6
5	9.3682	32	9.3804	34	0.6196	9.9878	2	5	5 17.5	17.0
6	9.3713	31	9.3837	33	0.6163	9.9876	2	4	6 21.0	20.4
7	9.3745	32	9.3870	33	0.6130	9.9875	1	3	7 24.5	23.8
8	9.3775	30	9.3903	33	0.6097	9.9873	2	2	8 28.0	27.2
9	9.3806	31	9.3935	32	0.6065	9.9871	2	1	9 31.5	30.6
14.0	9.3837	31	9.3968	33	0.6032	9.9869	2	76.0	33	32
1	9.3867	30	9.4000	32	0.6000	9.9867	2	9	1 3.3	3.2
2	9.3897	30	9.4032	32	0.5968	9.9865	2	8	2 6.6	6.4
3	9.3927	30	9.4064	32	0.5936	9.9863	2	7	3 9.9	9.6
4	9.3957	30	9.4095	31	0.5905	9.9861	2	6	4 13.2	12.8
5	9.3986	29	9.4127	32	0.5873	9.9859	2	5	5 16.5	16.0
6	9.4015	29	9.4158	31	0.5842	9.9857	2	4	6 19.8	19.2
7	9.4044	29	9.4189	31	0.5811	9.9855	2	3	7 23.1	22.4
8	9.4073	29	9.4220	31	0.5780	9.9853	2	2	8 26.4	25.6
9	9.4102	28	9.4250	30	0.5750	9.9851	2	1	9 29.7	28.8
15.0	9.4130		9 4281	31	0.5719	9.9849		75.0	31	30
	Lg. Cos.	d.	Lg. Cot.	d. c.	Lg. Tg.	Lg. Sin.	d.	Grade	1 3.1	3.0
									2 6.2	6.0
									3 9.3	9.0
									4 12.4	12.0
									5 15.5	15.0
									6 18.6	18.0
									7 21.7	21.0
									8 24.8	24.0
									9 27.9	27.0
									29	28
									1 2.9	2.8
									2 5.8	5.6
									3 8.7	8.4
									4 11.6	11.2
									5 14.5	14.0
									6 17.4	16.8
									7 20.3	19.6
									8 23.2	22.4
									9 26.1	25.2

Grade	Lg. Sin.	d.	Lg. Tg.	d. c.	Lg. Cot.	Lg. Cos.	d.		P. P.
15.0	9.4130	28	9.4281	30	0.5719	9.9849	2	75.0	
1	9.4158	28	9.4311	30	0.5689	9.9847	2	9	30 29
2	9.4186	28	9.4341	30	0.5659	9.9845	2	8	1 3.0 2.9
3	9.4214	28	9.4371	29	0.5629	9.9843	2	7	2 6.0 5.8
4	9.4242	27	9.4400	30	0.5600	9.9841	2	6	3 9.0 8.7
5	9.4269	27	9.4430	29	0.5570	9.9839	2	5	4 12.0 11.6
6	9.4296	27	9.4459	29	0.5541	9.9837	2	4	5 15.0 14.5
7	9.4323	27	9.4488	29	0.5512	9.9835	2	3	6 18.0 17.4
8	9.4350	27	9.4517	29	0.5483	9.9833	2	2	7 21.0 20.3
9	9.4377	26	9.4546	29	0.5454	9.9831	2	1	8 24.0 23.2
16.0	9.4403	27	9.4575	28	0.5425	9.9828	3	74.0	9 27.0 26.1
1	9.4430	26	9.4603	29	0.5397	9.9826	2	9	28 27
2	9.4456	26	9.4632	28	0.5368	9.9824	2	8	1 2.8 2.7
3	9.4482	26	9.4660	28	0.5340	9.9822	2	7	2 5.6 5.4
4	9.4508	25	9.4688	28	0.5312	9.9820	3	6	3 8.4 8.1
5	9.4533	26	9.4716	28	0.5284	9.9817	2	5	4 11.2 10.8
6	9.4559	25	9.4744	27	0.5256	9.9815	2	4	5 14.0 13.5
7	9.4584	25	9.4771	28	0.5229	9.9813	2	3	6 16.8 16.2
8	9.4609	25	9.4799	27	0.5201	9.9811	3	2	7 19.6 18.9
9	9.4634	25	9.4826	27	0.5174	9.9808	2	1	8 22.4 21.6
17.0	9.4659	25	9.4853	27	0.5147	9.9806	2	73.0	9 25.2 24.3
1	9.4684	25	9.4880	27	0.5120	9.9804	3	9	26 25
2	9.4709	24	9.4907	27	0.5093	9.9801	2	8	1 2.6 2.5
3	9.4733	24	9.4934	27	0.5066	9.9799	2	7	2 5.2 5.0
4	9.4757	24	9.4961	26	0.5039	9.9797	3	6	3 7.8 7.5
5	9.4781	24	9.4987	27	0.5013	9.9794	2	5	4 10.4 10.0
6	9.4805	24	9.5014	26	0.4986	9.9792	3	4	5 13.0 12.5
7	9.4829	24	9.5040	26	0.4960	9.9789	2	3	6 15.6 15.0
8	9.4853	23	9.5066	26	0.4934	9.9787	2	2	7 18.2 17.5
9	9.4876	24	9.5092	26	0.4908	9.9785	3	1	8 20.8 20.0
18.0	9.4900	23	9.5118	25	0.4882	9.9782	2	72.0	9 23.4 22.5
1	9.4923	23	9.5143	26	0.4857	9.9780	3	9	24
2	9.4946	23	9.5169	26	0.4831	9.9777	2	8	1 2.4
3	9.4969	23	9.5195	25	0.4805	9.9775	3	7	2 4.8
4	9.4992	23	9.5220	25	0.4780	9.9772	2	6	3 7.2
5	9.5015	22	9.5245	25	0.4755	9.9770	3	5	4 9.6
6	9.5037	23	9.5270	25	0.4730	9.9767	3	4	5 12.0
7	9.5060	22	9.5295	25	0.4705	9.9764	2	3	6 14.4
8	9.5082	22	9.5320	25	0.4680	9.9762	3	2	7 16.8
9	9.5104	22	9.5345	25	0.4655	9.9759	2	1	8 19.2
19.0	9.5126	22	9.5370	24	0.4630	9.9757	3	71.0	9 21.6
1	9.5148	22	9.5394	25	0.4606	9.9754	3	9	23 22
2	9.5170	22	9.5419	24	0.4581	9.9751	2	8	1 2.3 2.2
3	9.5192	21	9.5443	24	0.4557	9.9749	3	7	2 4.6 4.4
4	9.5213	22	9.5467	24	0.4533	9.9746	3	6	3 6.9 6.6
5	9.5235	21	9.5491	25	0.4509	9.9743	2	5	4 9.2 8.8
6	9.5256	22	9.5516	23	0.4484	9.9741	3	4	5 11.5 11.0
7	9.5278	21	9.5539	24	0.4461	9.9738	3	3	6 13.8 13.2
8	9.5299	21	9.5563	24	0.4437	9.9735	2	2	7 16.1 15.4
9	9.5320	21	9.5587	24	0.4413	9.9733	3	1	8 18.4 17.6
20.0	9.5341		9.5611		0.4389	9.9730		70.0	9 20.7 19.8
	Lg. Cos.	d.	Lg. Cot.	d. c.	Lg. Tg.	Lg. Sin.	d.	Grade	21
									1 2.1
									2 4.2
									3 6.3
									4 8.4
									5 10.5
									6 12.6
									7 14.7
									8 16.8
									9 18.9

Grade	Lg. Sin.	d.	Lg. Tg.	d. c.	Lg. Cot.	Lg. Cos.	d.		P. P.
20.0	9.5341	20	9.5611	23	0.4389	9.9730	3	70.0	
1	9.5361	21	9.5634	24	0.4366	9.9727	3	9	
2	9.5382	20	9.5658	23	0.4342	9.9724	2	8	
3	9.5402	21	9.5681	23	0.4319	9.9722	3	7	23 22
4	9.5423	20	9.5704	23	0.4296	9.9719	3	6	1 2.3 2.2 2 4.6 4.4
5	9.5443	20	9.5727	23	0.4273	9.9716	3	5	3 6.9 6.6 4 9.2 8.8
6	9.5463	21	9.5750	23	0.4250	9.9713	3	4	5 11.5 11.0 6 13.8 13.2
7	9.5484	20	9.5773	23	0.4227	9.9710	3	3	7 16.1 15.4 8 18.4 17.6
8	9.5504	19	9.5796	23	0.4204	9.9707	3	2	9 20.7 19.8
9	9.5523	20	9.5819	23	0.4181	9.9704	2	1	
21.0	9.5543	20	9.5842	22	0.4158	9.9702	3	69.0	
1	9.5563	20	9.5864	23	0.4136	9.9699	3	9	
2	9.5583	19	9.5887	22	0.4113	9.9696	3	8	
3	9.5602	19	9.5909	23	0.4091	9.9693	3	7	21 20
4	9.5621	20	9.5932	22	0.4068	9.9690	3	6	1 2.1 2.0 2 4.2 4.0
5	9.5641	19	9.5954	22	0.4046	9.9687	3	5	3 6.3 6.0 4 8.4 8.0
6	9.5660	19	9.5976	22	0.4024	9.9684	3	4	5 10.5 10.0 6 12.6 12.0
7	9.5679	19	9.5998	22	0.4002	9.9681	3	3	7 14.7 14.0 8 16.8 16.0
8	9.5698	19	9.6020	22	0.3980	9.9678	3	2	9 18.9 18.0
9	9.5717	19	9.6042	22	0.3958	9.9675	3	1	
22.0	9.5736	18	9.6064	22	0.3936	9.9672	3	68.0	
1	9.5754	19	9.6086	22	0.3914	9.9669	3	9	
2	9.5773	19	9.6108	21	0.3892	9.9666	3	8	
3	9.5792	18	9.6129	22	0.3871	9.9662	4	7	19
4	9.5810	18	9.6151	21	0.3849	9.9659	3	6	1 1.9 2 3.8
5	9.5828	19	9.6172	22	0.3828	9.9656	3	5	3 5.7 4 7.6
6	9.5847	18	9.6194	21	0.3806	9.9653	3	4	5 9.5 6 11.4
7	9.5865	18	9.6215	21	0.3785	9.9650	3	3	7 13.3 8 15.2
8	9.5883	18	9.6236	21	0.3764	9.9647	4	2	9 17.1
9	9.5901	18	9.6257	22	0.3743	9.9643	3	1	
23.0	9.5919	18	9.6279	21	0.3721	9.9640	3	67.0	
1	9.5937	17	9.6300	21	0.3700	9.9637	3	9	
2	9.5954	18	9.6321	20	0.3679	9.9634	3	8	18 17
3	9.5972	18	9.6341	21	0.3659	9.9631	4	7	1 1.8 1.7 2 3.6 3.4
4	9.5990	17	9.6362	21	0.3638	9.9627	3	6	3 5.4 5.1 4 7.2 6.8
5	9.6007	17	9.6383	21	0.3617	9.9624	3	5	5 9.0 8.5 6 10.8 10.2
6	9.6024	18	9.6404	20	0.3596	9.9621	4	4	7 12.6 11.9 8 14.4 13.6
7	9.6042	17	9.6424	21	0.3576	9.9617	3	3	9 16.2 15.3
8	9.6059	17	9.6445	20	0.3555	9.9614	3	2	
9	9.6076	17	9.6465	21	0.3535	9.9611	4	1	
24.0	9.6093	17	9.6486	20	0.3514	9.9607	3	66.0	
1	9.6110	17	9.6506	21	0.3494	9.9604	3	9	
2	9.6127	17	9.6527	20	0.3473	9.9601	4	8	16
3	9.6144	17	9.6547	20	0.3453	9.9597	3	7	1 1.6 2 3.2
4	9.6161	16	9.6567	20	0.3433	9.9594	4	6	3 4.8 4 6.4
5	9.6177	17	9.6587	20	0.3413	9.9590	3	5	5 8.0 6 9.6
6	9.6194	16	9.6607	20	0.3393	9.9587	4	4	7 11.2 8 12.8
7	9.6210	17	9.6627	20	0.3373	9.9583	3	3	9 14.4
8	9.6227	16	9.6647	20	0.3353	9.9580	4	2	
9	9.6243	16	9.6667	20	0.3333	9.9576	3	1	
25.0	9.6259		9.6687		0.3313	9.9573		65.0	
	Lg. Cos.	d.	Lg. Cot.	d. c.	Lg. Tg.	Lg. Sin.	d.	Grade	

25°—30°

Grade	Lg. Sin.	d.	Lg. Tg.	d. c.	Lg. Cot.	Lg. Cos.	d.		P. P.
25.0	9.6259	17	9.6687	19	0.3313	9.9573	4	65.0	
1	9.6276	16	9.6706	20	0.3294	9.9569	3	9	
2	9.6292	16	9.6726	20	0.3274	9.9566	4	8	
3	9.6308	16	9.6746	19	0.3254	9.9562	4	7	20 19
4	9.6324	16	9.6765	20	0.3235	9.9558	3	6	1 2.0 1.9
5	9.6340	16	9.6785	19	0.3215	9.9555	4	5	2 4.0 3.8
6	9.6356	15	9.6804	20	0.3196	9.9551	3	4	3 6.0 5.7
7	9.6371	16	9.6824	19	0.3176	9.9548	4	3	4 8.0 7.6
8	9.6387	16	9.6843	20	0.3157	9.9544	4	2	5 10.0 9.5
9	9.6403	15	9.6863	19	0.3137	9.9540	3	1	6 12.0 11.4
26.0	9.6418	16	9.6882	19	0.3118	9.9537	4	64.0	7 14.0 13.3
1	9.6434	15	9.6901	19	0.3099	9.9533	4	9	8 16.0 15.2
2	9.6449	16	9.6920	19	0.3080	9.9529	4	8	9 18.0 17.1
3	9.6465	15	9.6939	19	0.3061	9.9525	4	7	
4	9.6480	15	9.6958	19	0.3042	9.9522	3	6	18 17
5	9.6495	15	9.6977	19	0.3023	9.9518	4	5	1 1.8 1.7
6	9.6510	16	9.6996	19	0.3004	9.9514	4	4	2 3.6 3.4
7	9.6526	15	9.7015	19	0.2985	9.9510	4	3	3 5.4 5.1
8	9.6541	15	9.7034	19	0.2966	9.9506	4	2	4 7.2 6.8
9	9.6556	14	9.7053	19	0.2947	9.9503	3	1	5 9.0 8.5
27.0	9.6570	15	9.7072	18	0.2928	9.9499	4	63.0	6 10.8 10.2
1	9.6585	15	9.7090	19	0.2910	9.9495	4	9	7 12.6 11.9
2	9.6600	15	9.7109	19	0.2891	9.9491	4	8	8 14.4 13.6
3	9.6615	14	9.7128	18	0.2872	9.9487	4	7	9 16.2 15.3
4	9.6629	15	9.7146	19	0.2854	9.9483	4	6	
5	9.6644	15	9.7165	18	0.2835	9.9479	4	5	16 15
6	9.6659	14	9.7183	19	0.2817	9.9475	4	4	1 1.6 1.5
7	9.6673	14	9.7202	18	0.2798	9.9471	4	3	2 3.2 3.0
8	9.6687	15	9.7220	18	0.2780	9.9467	4	2	3 4.8 4.5
9	9.6702	14	9.7238	19	0.2762	9.9463	4	1	4 6.4 6.0
28.0	9.6716	14	9.7257	18	0.2743	9.9459	4	62.0	5 8.0 7.5
1	9.6730	14	9.7275	18	0.2725	9.9455	4	9	6 9.6 9.0
2	9.6744	15	9.7293	18	0.2707	9.9451	4	8	7 11.2 10.5
3	9.6759	14	9.7311	19	0.2689	9.9447	4	7	8 12.8 12.0
4	9.6773	14	9.7330	18	0.2670	9.9443	4	6	9 14.4 13.5
5	9.6787	14	9.7348	18	0.2652	9.9439	4	5	
6	9.6801	13	9.7366	18	0.2634	9.9435	4	4	14 13
7	9.6814	14	9.7384	18	0.2616	9.9431	4	3	1 1.4 1.3
8	9.6828	14	9.7402	18	0.2598	9.9427	5	2	2 2.8 2.6
9	9.6842	14	9.7420	18	0.2580	9.9422	4	1	3 4.2 3.9
29.0	9.6856	13	9.7438	17	0.2562	9.9418	4	61.0	4 5.6 5.2
1	9.6869	14	9.7455	18	0.2545	9.9414	4	9	5 7.0 6.5
2	9.6883	13	9.7473	18	0.2527	9.9410	4	8	6 8.4 7.8
3	9.6896	14	9.7491	18	0.2509	9.9406	5	7	7 9.8 9.1
4	9.6910	13	9.7509	17	0.2491	9.9401	4	6	8 11.2 10.4
5	9.6923	14	9.7526	18	0.2474	9.9397	4	5	9 12.6 11.7
6	9.6937	13	9.7544	18	0.2456	9.9393	5	4	
7	9.6950	13	9.7562	17	0.2438	9.9388	4	3	3 4
8	9.6963	14	9.7579	18	0.2421	9.9384	4	2	1 0.3 0.4
9	9.6977	13	9.7597	17	0.2403	9.9380	5	1	2 0.6 0.8
30.0	9.6990		9.7614		0.2386	9.9375		60.0	3 0.9 1.2
	Lg. Cos.	d.	Lg. Cot.	d. c.	Lg. Tg.	Lg. Sin.	d.	Grade	4 1.2 1.6
									5 1.5 2.0
									6 1.8 2.4
									7 2.1 2.8
									8 2.4 3.2
									9 2.7 3.6

60°—65°

Grade	Lg. Sin.	d.	Lg. Tg.	d. c.	Lg. Cot.	Lg. Cos.	d.		P. P.
30.0	9.6990	13	9.7614	18	0.2386	9.9375	4	60.0	
1	9.7003	13	9.7632	17	0.2368	9.9371	4	9	
2	9.7016	13	9.7649	18	0.2351	9.9367	5	8	
3	9.7029	13	9.7667	17	0.2333	9.9362	4	7	18 17
4	9.7042	13	9.7684	17	0.2316	9.9358	5	6	1 1.8 1.7 2 3.6 3.4
5	9.7055	13	9.7701	18	0.2299	9.9353	4	5	3 5.4 5.1 4 7.2 6.8
6	9.7068	12	9.7719	17	0.2281	9.9349	5	4	5 9.0 8.5 6 10.8 10.2
7	9.7080	13	9.7736	17	0.2264	9.9344	4	3	7 12.6 11.9 8 14.4 13.6
8	9.7093	13	9.7753	18	0.2247	9.9340	5	2	9 16.2 15.3
9	9.7106	12	9.7771	17	0.2229	9.9335	4	1	
31.0	9.7118	13	9.7788	17	0.2212	9.9331	5	59.0	
1	9.7131	13	9.7805	17	0.2195	9.9326	4	9	
2	9.7144	12	9.7822	17	0.2178	9.9322	5	8	
3	9.7156	12	9.7839	17	0.2161	9.9317	5	7	16
4	9.7168	13	9.7856	17	0.2144	9.9312	4	6	1 1.6 2 3.2
5	9.7181	12	9.7873	17	0.2127	9.9308	5	5	3 4.8 4 6.4
6	9.7193	12	9.7890	17	0.2110	9.9303	5	4	5 8.0 6 9.6
7	9.7205	13	9.7907	17	0.2093	9.9298	4	3	7 11.2 8 12.8
8	9.7218	12	9.7924	17	0.2076	9.9294	5	2	9 14.4
9	9.7230	12	9.7941	17	0.2059	9.9289	5	1	
32.0	9.7242	12	9.7958	17	0.2042	9.9284	5	58.0	
1	9.7254	12	9.7975	17	0.2025	9.9279	4	9	
2	9.7266	12	9.7992	17	0.2008	9.9275	5	8	
3	9.7278	12	9.8008	16	0.1992	9.9270	5	7	13 12 1 1.3 1.2
4	9.7290	12	9.8025	17	0.1975	9.9265	5	6	2 2.6 2.4 3 3.9 3.6
5	9.7302	12	9.8042	17	0.1958	9.9260	5	5	4 5.2 4.8 5 6.5 6.0
6	9.7314	12	9.8059	16	0.1941	9.9255	4	4	6 7.8 7.2 7 9.1 8.4
7	9.7326	12	9.8075	17	0.1925	9.9251	5	3	8 10.4 9.6 9 11.7 10.8
8	9.7338	11	9.8092	17	0.1908	9.9246	5	2	
9	9.7349	12	9.8109	16	0.1891	9.9241	5	1	
33.0	9.7361	12	9.8125	17	0.1875	9.9236	5	57.0	
1	9.7373	11	9.8142	16	0.1858	9.9231	5	9	
2	9.7384	12	9.8158	17	0.1842	9.9226	5	8	
3	9.7396	11	9.8175	16	0.1825	9.9221	5	7	11 1 1.1
4	9.7407	12	9.8191	17	0.1809	9.9216	5	6	2 2.2 3 3.3
5	9.7419	11	9.8208	16	0.1792	9.9211	5	5	4 4.4 5 5.5
6	9.7430	12	9.8224	17	0.1776	9.9206	5	4	6 6.6 7 7.7
7	9.7442	11	9.8241	16	0.1759	9.9201	5	3	8 8.8 9 9.9
8	9.7453	11	9.8257	17	0.1743	9.9196	5	2	
9	9.7464	12	9.8274	16	0.1726	9.9191	5	1	
34.0	9.7476	11	9.8290	16	0.1710	9.9186	5	56.0	
1	9.7487	11	9.8306	17	0.1694	9.9181	6	9	
2	9.7498	11	9.8323	16	0.1677	9.9175	5	8	
3	9.7509	11	9.8339	16	0.1661	9.9170	5	7	5 6 1 0.5 0.6
4	9.7520	11	9.8355	16	0.1645	9.9165	5	6	2 1.0 1.2 3 1.5 1.8
5	9.7531	11	9.8371	16	0.1629	9.9160	5	5	4 2.0 2.4 5 2.5 3.0
6	9.7542	11	9.8388	17	0.1612	9.9155	6	4	6 3.0 3.6 7 3.5 4.2
7	9.7553	11	9.8404	16	0.1596	9.9149	5	3	8 4.0 4.8 9 4.5 5.4
8	9.7564	11	9.8420	16	0.1580	9.9144	5	2	
9	9.7575	11	9.8436	16	0.1564	9.9139	5	1	
35.0	9.7586		9.8452		0.1548	9.9134		55.0	
	Lg. Cos.	d.	Lg. Cot.	d. c.	Lg. Tg.	Lg. Sin.	d.	Grade	

Grade	Lg. Sin.	d.	Lg. Tg.	d. c.	Lg. Cot.	Lg. Cos.	d.		P. P.
35.0	9.7586	11	9.8452	16	0.1548	9.9134	6	55.0	
1	9.7597	10	9.8468	16	0.1532	9.9128	5	9	
2	9.7607	11	9.8484	17	0.1516	9.9123	5	8	
3	9.7618	11	9.8501	16	0.1499	9.9118	6	7	17 | 16
4	9.7629	11	9.8517	16	0.1483	9.9112	6	6	1 | 1.7 | 1.6
5	9.7640	10	9.8533	16	0.1467	9.9107	5	5	2 | 3.4 | 3.2
6	9.7650	11	9.8549	16	0.1451	9.9101	6	4	3 | 5.1 | 4.8
7	9.7661	10	9.8565	16	0.1435	9.9096	5	3	4 | 6.8 | 6.4
8	9.7671	11	9.8581	16	0.1419	9.9091	5	2	5 | 8.5 | 8.0
9	9.7682	10	9.8597	16	0.1403	9.9085	6	1	6 | 10.2 | 9.6
36.0	9.7692	11	9.8613	16	0.1387	9.9080	5	54.0	7 | 11.9 | 11.2
1	9.7703	10	9.8629	15	0.1371	9.9074	6	9	8 | 13.6 | 12.8
2	9.7713	10	9.8644	16	0.1356	9.9069	5	8	9 | 15.3 | 14.4
3	9.7723	11	9.8660	16	0.1340	9.9063	6	7	
4	9.7734	10	9.8676	16	0.1324	9.9057	6	6	15
5	9.7744	10	9.8692	16	0.1308	9.9052	5	5	1 | 1.5
6	9.7754	10	9.8708	16	0.1292	9.9046	6	4	2 | 3.0
7	9.7764	10	9.8724	16	0.1276	9.9041	5	3	3 | 4.5
8	9.7774	11	9.8740	16	0.1260	9.9035	6	2	4 | 6.0
9	9.7785	10	9.8755	15	0.1245	9.9029	6	1	5 | 7.5
37.0	9.7795	10	9.8771	16	0.1229	9.9023	6	53.0	6 | 9.0
1	9.7805	10	9.8787	16	0.1213	9.9018	5	9	7 | 10.5
2	9.7815	10	9.8803	15	0.1197	9.9012	6	8	8 | 12.0
3	9.7825	10	9.8818	16	0.1182	9.9006	6	7	9 | 13.5
4	9.7835	9	9.8834	16	0.1166	9.9000	6	6	
5	9.7844	10	9.8850	15	0.1150	9.8995	5	5	11 | 10
6	9.7854	10	9.8865	16	0.1135	9.8989	6	4	1 | 1.1 | 1.0
7	9.7864	10	9.8881	16	0.1119	9.8983	6	3	2 | 2.2 | 2.0
8	9.7874	10	9.8897	15	0.1103	9.8977	6	2	3 | 3.3 | 3.0
9	9.7884	9	9.8912	16	0.1088	9.8971	6	1	4 | 4.4 | 4.0
38.0	9.7893	10	9 8928	16	0.1072	9.8965	6	52.0	5 | 5.5 | 5.0
1	9.7903	10	9.8944	15	0.1056	9.8959	6	9	6 | 6.6 | 6.0
2	9.7913	9	9.8959	16	0.1041	9.8953	6	8	7 | 7.7 | 7.0
3	9.7922	10	9.8975	15	0.1025	9.8947	6	7	8 | 8.8 | 8.0
4	9.7932	9	9.8990	16	0.1010	9.8941	6	6	9 | 9.9 | 9.0
5	9.7941	10	9.9006	16	0.0994	9.8935	6	5	
6	9.7951	9	9.9022	15	0.0978	9.8929	6	4	9
7	9.7960	10	9.9037	16	0.0963	9.8923	6	3	1 | 0.9
8	9.7970	9	9.9053	15	0.0947	9.8917	6	2	2 | 1.8
9	9.7979	10	9.9068	16	0.0932	9.8911	6	1	3 | 2.7
39.0	9.7989	9	9.9084	15	0.0916	9.8905	6	51.0	4 | 3.6
1	9.7998	9	9.9099	16	0.0901	9.8899	6	9	5 | 4.5
2	9.8007	10	9.9115	15	0.0885	9.8893	6	8	6 | 5.4
3	9.8017	9	9.9130	16	0.0870	9.8887	7	7	7 | 6.3
4	9.8026	9	9.9146	15	0.0854	9.8880	6	6	8 | 7.2
5	9.8035	9	9.9161	15	0.0839	9.8874	6	5	9 | 8.1
6	9.8044	9	9.9176	16	0.0824	9.8868	6	4	
7	9.8053	10	9.9192	15	0.0808	9.8862	7	3	5 | 6
8	9.8063	9	9.9207	16	0.0793	9.8855	6	2	1 | 0.5 | 0.6
9	9.8072	9	9.9223	15	0.0777	9.8849	6	1	2 | 1.0 | 1.2
40.0	9.8081		9.9238		0.0762	9.8843		50.0	3 | 1.5 | 1.8
	Lg. Cos.	d.	Lg. Cot.	d. c.	Lg. Tg.	Lg. Sin.	d.	Grade	4 | 2.0 | 2.4
									5 | 2.5 | 3.0
									6 | 3.0 | 3.6
									7 | 3.5 | 4.2
									8 | 4.0 | 4.8
									9 | 4.5 | 5.4

Grade	Lg. Sin.	d.	Lg. Tg.	d. c.	Lg. Cot.	Lg. Cos.	d.		P. P.
40.0	9.8081		9.9238		0.0762	9.8843		50.0	
		9		16			7		
1	9.8090		9.9254		0.0746	9.8836	6	9	
		9		15				8	
2	9.8099		9.9269		0.0731	9.8830	7		
		9		15				7	16
3	9.8108		9.9284		0.0716	9.8823	6		1 1.6
		9		16				6	2 3.2
4	9.8117		9.9300		0.0700	9.8817			3 4.8
		8		15			7		4 6.4
5	9.8125		9.9315		0.0685	9.8810	6	5	5 8.0
		9		15					6 9.6
6	9.8134		9.9330		0.0670	9.8804	7	4	7 11.2
		9		16					8 12.8
7	9.8143		9.9346		0.0654	9.8797	6	3	9 14.4
		9		15					
8	9.8152		9.9361		0.0639	9.8791	7	2	
		9		15					
9	9.8161		9.9376		0.0624	9.8784	6	1	
		8		16					
41.0	9.8169		9.9392		0.0608	9.8778		49.0	
		9		15			7		
1	9.8178		9.9407		0.0593	9.8771	6	9	
		9		15				8	
2	9.8187		9.9422		0.0578	9.8765	7		
		8		16				7	15
3	9.8195		9.9438		0.0562	9.8758	7		1 1.5
		9		15				6	2 3.0
4	9.8204		9.9453		0.0547	9.8751			3 4.5
		9		15			6	5	4 6.0
5	9.8213		9.9468		0.0532	9.8745			5 7.5
		8		15			7		6 9.0
6	9.8221		9.9483		0.0517	9.8738	7	4	7 10.5
		9		16					8 12.0
7	9.8230		9.9499		0.0501	9.8731		3	9 13.5
		8		15			7		
8	9.8238		9.9514		0.0486	9.8724	6	2	
		9		15					
9	9.8247		9.9529		0.0471	9.8718	7	1	
		8		15					
42.0	9.8255		9.9544		0.0456	9.8711	7	48.0	
		9		16					
1	9.8264		9.9560		0.0440	9.8704	7	9	
		8		15				8	
2	9.8272		9.9575		0.0425	9.8697	7		
		8		15				7	9
3	9.8280		9.9590		0.0410	9.8690	7		1 0.9
		9		15				6	2 1.8
4	9.8289		9.9605		0.0395	9.8683			3 2.7
		8		16			7	5	4 3.6
5	9.8297		9.9621		0.0379	9.8676	7		5 4.5
		8		15				4	6 5.4
6	9.8305		9.9636		0.0364	9.8669	7		7 6.3
		8		15					8 7.2
7	9.8313		9.9651		0.0349	9.8662		3	9 8.1
		9		15			7		
8	9.8322		9.9666		0.0334	9.8655	7	2	
		8		15					
9	9.8330		9.9681		0.0319	9.8648	7	1	
		8		16					
43.0	9.8338		9.9697		0.0303	9.8641	7	47.0	
		8		15					
1	9.8346		9.9712		0.0288	9.8634	7	9	
		8		15				8	
2	9.8354		9.9727		0.0273	9.8627	7		
		8		15				7	8
3	9.8362		9.9742		0.0258	9.8620	7		1 0.8
		8		15				6	2 1.6
4	9.8370		9.9757		0.0243	9.8613			3 2.4
		8		15			7	5	4 3.2
5	9.8378		9.9772		0.0228	9.8606	8		5 4.0
		8		16				4	6 4.8
6	9.8386		9.9788		0.0212	9.8598	7		7 5.6
		8		15					8 6.4
7	9.8394		9.9803		0.0197	9.8591		3	9 7.2
		8		15			7		
8	9.8402		9.9818		0.0182	9.8584	7	2	
		8		15					
9	9.8410		9.9833		0.0167	9.8577	8	1	
		8		15					
44.0	9.8418		9.9848		0.0152	9.8569	7	46.0	
		8		16					
1	9.8426		9.9864		0.0136	9.8562	7	9	
		7		15				8	6 7
2	9.8433		9.9879		0.0121	9.8555	8		1 0.6 0.7
		8		15				7	2 1.2 1.4
3	9.8441		9.9894		0.0106	9.8547	7		3 1.8 2.1
		8		15				6	4 2.4 2.8
4	9.8449		9.9909		0.0091	9.8540	8		5 3.0 3.5
		8		15				5	6 3.6 4.2
5	9.8457		9.9924		0.0076	9.8532	7		7 4.2 4.9
		7		15				4	8 4.8 5.6
6	9.8464		9.9939		0.0061	9.8525	8		9 5.4 6.3
		8		16					
7	9.8472		9.9955		0.0045	9.8517		3	
		8		15			7		
8	9.8480		9.9970		0.0030	9.8510	8	2	
		7		15					
9	9.8487		9.9985		0.0015	9.8502	7	1	
		8		15					
45.0	9.8495		10.0000		0.0000	9.8495		45.0	
	Lg. Cos.	d.	Lg. Cot.	d. c.	Lg. Tg.	Lg. Sin.	d.	Grade	

Taf. IV. Grade, Stunden, Minuten und Sekunden in Decimalteilen des Tages.

Grade.	Stunden u. Minuten.	Decimalteile des Tages.	Grade.	Stunden u. Minuten.	Decimalteile des Tages.	Grade.	Stunden u. Minuten.	Decimalteile des Tages.	Grade.	Stunden u. Minuten.	Decimalteile des Tages.
°	h. m.		°	h. m.		°	h. m.		°	h. m.	
0	0 0	0.0000	50	3 20	0.1389	100	6 40	0.2778	150	10 0	0.4167
1	0 4	0.0028	51	3 24	0.1417	101	6 44	0.2806	151	10 4	0.4194
2	0 8	0.0056	52	3 28	0.1444	102	6 48	0.2833	152	10 8	0.4222
3	0 12	0.0083	53	3 32	0.1472	103	6 52	0.2861	153	10 12	0.4250
4	0 16	0.0111	54	3 36	0.1500	104	6 56	0.2889	154	10 16	0.4278
5	0 20	0.0139	55	3 40	0.1528	105	7 0	0.2917	155	10 20	0.4306
6	0 24	0.0167	56	3 44	0.1556	106	7 4	0.2944	156	10 24	0.4333
7	0 28	0.0194	57	3 48	0.1583	107	7 8	0.2972	157	10 28	0.4361
8	0 32	0.0222	58	3 52	0.1611	108	7 12	0.3000	158	10 32	0.4389
9	0 36	0.0250	59	3 56	0.1639	109	7 16	0.3028	159	10 36	0.4417
10	0 40	0.0278	60	4 0	0.1667	110	7 20	0.3056	160	10 40	0.4444
11	0 44	0.0306	61	4 4	0.1694	111	7 24	0.3083	161	10 44	0.4472
12	0 48	0.0333	62	4 8	0.1722	112	7 28	0.3111	162	10 48	0.4500
13	0 52	0.0361	63	4 12	0.1750	113	7 32	0.3139	163	10 52	0.4528
14	0 56	0.0389	64	4 16	0.1778	114	7 36	0.3167	164	10 56	0.4556
15	1 0	0.0417	65	4 20	0.1806	115	7 40	0.3194	165	11 0	0.4583
16	1 4	0.0444	66	4 24	0.1833	116	7 44	0.3222	166	11 4	0.4611
17	1 8	0.0472	67	4 28	0.1861	117	7 48	0.3250	167	11 8	0.4639
18	1 12	0.0500	68	4 32	0.1889	118	7 52	0.3278	168	11 12	0.4667
19	1 16	0.0528	69	4 36	0.1917	119	7 56	0.3306	169	11 16	0.4694
20	1 20	0.0556	70	4 40	0.1944	120	8 0	0.3333	170	11 20	0.4722
21	1 24	0.0583	71	4 44	0.1972	121	8 4	0.3361	171	11 24	0.4750
22	1 28	0.0611	72	4 48	0.2000	122	8 8	0.3389	172	11 28	0.4778
23	1 32	0.0639	73	4 52	0.2028	123	8 12	0.3417	173	11 32	0.4806
24	1 36	0.0667	74	4 56	0.2056	124	8 16	0.3444	174	11 36	0.4833
25	1 40	0.0694	75	5 0	0.2083	125	8 20	0.3472	175	11 40	0.4861
26	1 44	0.0722	76	5 4	0.2111	126	8 24	0.3500	176	11 44	0.4889
27	1 48	0.0750	77	5 8	0.2139	127	8 28	0.3528	177	11 48	0.4917
28	1 52	0.0778	78	5 12	0.2167	128	8 32	0.3556	178	11 52	0.4944
29	1 56	0.0806	79	5 16	0.2194	129	8 36	0.3583	179	11 56	0.4972
30	2 0	0.0833	80	5 20	0.2222	130	8 40	0.3611	180	12 0	0.5000
31	2 4	0.0861	81	5 24	0.2250	131	8 44	0.3639			
32	2 8	0.0889	82	5 28	0.2278	132	8 48	0.3667			
33	2 12	0.0917	83	5 32	0.2306	133	8 52	0.3694			
34	2 16	0.0944	84	5 36	0.2333	134	8 56	0.3722			
35	2 20	0.0972	85	5 40	0.2361	135	9 0	0.3750	°	m. s.	
36	2 24	0.1000	86	5 44	0.2389	136	9 4	0.3778	0.1	0 24	0.0003
37	2 28	0.1028	87	5 48	0.2417	137	9 8	0.3806	0.2	0 48	0.0006
38	2 32	0.1056	88	5 52	0.2444	138	9 12	0.3833	0.3	1 12	0.0008
39	2 36	0.1083	89	5 56	0.2472	139	9 16	0.3861	0.4	1 36	0.0011
40	2 40	0.1111	90	6 0	0.2500	140	9 20	0.3889	0.5	2 0	0.0014
41	2 44	0.1139	91	6 4	0.2528	141	9 24	0.3917	0.6	2 24	0.0017
42	2 48	0.1167	92	6 8	0.2556	142	9 28	0.3944	0.7	2 48	0.0019
43	2 52	0.1194	93	6 12	0.2583	143	9 32	0.3972	0.8	3 12	0.0022
44	2 56	0.1222	94	6 16	0.2611	144	9 36	0.4000	0.9	3 36	0.0025
45	3 0	0.1250	95	6 20	0.2639	145	9 40	0.4028	1.0	4 0	0.0028
46	3 4	0.1278	96	6 24	0.2667	146	9 44	0.4056			
47	3 8	0.1306	97	6 28	0.2694	147	9 48	0.4083			
48	3 12	0.1333	98	6 32	0.2722	148	9 52	0.4111			
49	3 16	0.1361	99	6 36	0.2750	149	9 56	0.4139			
50	3 20	0.1389	100	6 40	0.2778	150	10 0	0.4167			

TAFEL V.

LOGARITHMEN

DER

SUMMEN UND DIFFERENZEN.

Gegeben log. a und log. b, wo a > b, so ist bis A = 10.

für Summen

wenn 10 + log. b − log. a = A
log. (a + b) = log a + B.

für Differenzen

wenn log. a − log. b = B
log. (a − b) = log. b + A − 10.

Additions- und Subtraktions-Logarithmen.

A	B 0	1	2	3	4	5	6	7	8	9	P. P.
6.	0.0000	0001	0001	0001	0001	0001	0002	0002	0003	0003	
7.0	0.0004	0004	0005	0005	0005	0005	0005	0005	0005	0005	
1	0.0005	0006	0006	0006	0006	0006	0006	0006	0007	0007	
2	0.0007	0007	0007	0007	0008	0008	0008	0008	0008	0008	
3	0.0009	0009	0009	0009	0009	0010	0010	0010	0010	0011	
4	0.0011	0011	0011	0012	0012	0012	0013	0013	0013	0013	
5	0.0014	0014	0014	0015	0015	0015	0016	0016	0016	0017	
6	0.0017	0018	0018	0018	0019	0019	0020	0020	0021	0021	
7	0.0022	0022	0023	0023	0024	0024	0025	0025	0026	0027	
8	0.0027	0028	0029	0029	0030	0031	0031	0032	0033	0034	
9	0.0034	0035	0036	0037	0038	0039	0039	0040	0041	0042	
8.0	0.0043	0044	0045	0046	0047	0048	0050	0051	0052	0053	
1	0.0054	0056	0057	0058	0060	0061	0062	0064	0065	0067	
2	0.0068	0070	0071	0073	0075	0077	0078	0080	0082	0084	
3	0.0086	0088	0090	0092	0094	0096	0098	0101	0103	0105	
4	0.0108	0110	0113	0115	0118	0121	0123	0126	0129	0132	
5	0.0135	0138	0141	0145	0148	0151	0155	0158	0162	0166	
6	0.0170	0173	0177	0181	0186	0190	0194	0199	0203	0208	
7	0.0212	0217	0222	0227	0232	0238	0243	0248	0254	0260	
8	0.0266	0272	0278	0284	0291	0297	0304	0311	0318	0325	
9	0.0332	0339	0347	0355	0363	0371	0379	0387	0396	0405	
9.0	0.0414										
A	B 0	1	2	3	4	5	6	7	8	9	

	4	5
1	0.4	0.5
2	0.8	1.0
3	1.2	1.5
4	1.6	2.0
5	2.0	2.5
6	2.4	3.0
7	2.8	3.5
8	3.2	4.0
9	3.6	4.5

	6	7
1	0.6	0.7
2	1.2	1.4
3	1.8	2.1
4	2.4	2.8
5	3.0	3.5
6	3.6	4.2
7	4.2	4.9
8	4.8	5.6
9	5.4	6.3

	8	9
1	0.8	0.9
2	1.6	1.8
3	2.4	2.7
4	3.2	3.6
5	4.0	4.5
6	4.8	5.4
7	5.6	6.3
8	6.4	7.2
9	7.2	8.1

A	B 0	1	2	3	4	5	6	7	8	9	P. P.
9.00	0.0414	0415	0416	0417	0418	0418	0419	0420	0421	0422	
01	0.0423	0424	0425	0426	0427	0428	0429	0430	0431	0432	
02	0.0432	0433	0434	0435	0436	0437	0438	0439	0440	0441	
03	0.0442	0443	0444	0445	0446	0447	0448	0449	0450	0451	
04	0.0452	0453	0454	0455	0456	0457	0458	0459	0460	0461	
05	0.0462	0463	0464	0465	0466	0467	0468	0469	0470	0471	
06	0.0472	0473	0474	0475	0476	0477	0478	0479	0480	0481	
07	0.0482	0483	0485	0486	0487	0488	0489	0490	0491	0492	
08	0.0493	0494	0495	0496	0497	0498	0500	0501	0502	0503	
09	0.0504	0505	0506	0507	0508	0509	0511	0512	0513	0514	
9.10	0.0515	0516	0517	0518	0519	0521	0522	0523	0524	0525	
11	0.0526	0527	0529	0530	0531	0532	0533	0534	0535	0537	
12	0.0538	0539	0540	0541	0542	0544	0545	0546	0547	0548	
13	0.0550	0551	0552	0553	0554	0556	0557	0558	0559	0560	2
14	0.0562	0563	0564	0565	0566	0568	0569	0570	0571	0573	1 0.2 2 0.4 3 0.6 4 0.8 5 1.0 6 1.2 7 1.4 8 1.6 9 1.8
15	0.0574	0575	0576	0578	0579	0580	0581	0583	0584	0585	
16	0.0586	0588	0589	0590	0591	0593	0594	0595	0597	0598	
17	0.0599	0600	0602	0603	0604	0606	0607	0608	0609	0611	
18	0.0612	0613	0615	0616	0617	0619	0620	0621	0623	0624	
19	0.0625	0627	0628	0629	0631	0632	0633	0635	0636	0638	
9.20	0.0639	0640	0642	0643	0644	0646	0647	0649	0650	0651	
21	0.0653	0654	0656	0657	0658	0660	0661	0663	0664	0665	
22	0.0667	0668	0670	0671	0673	0674	0675	0677	0678	0680	
23	0.0681	0683	0684	0686	0687	0689	0690	0691	0693	0694	
24	0.0696	0697	0699	0700	0702	0703	0705	0706	0708	0709	
25	0.0711	0712	0714	0715	0717	0718	0720	0721	0723	0725	
26	0.0726	0728	0729	0731	0732	0734	0735	0737	0738	0740	
27	0.0742	0743	0745	0746	0748	0749	0751	0753	0754	0756	
28	0.0757	0759	0761	0762	0764	0766	0767	0769	0770	0772	
29	0.0774	0775	0777	0779	0780	0782	0783	0785	0787	0788	
9.30	0.0790	0792	0793	0795	0797	0798	0800	0802	0804	0805	
31	0.0807	0809	0810	0812	0814	0815	0817	0819	0821	0822	
32	0.0824	0826	0827	0829	0831	0833	0834	0836	0838	0840	3
33	0.0841	0843	0845	0847	0849	0850	0852	0854	0856	0857	1 0.3 2 0.6 3 0.9 4 1.2 5 1.5 6 1.8 7 2.1 8 2.4 9 2.7
34	0.0859	0861	0863	0865	0866	0868	0870	0872	0874	0876	
35	0.0877	0879	0881	0883	0885	0887	0888	0890	0892	0894	
36	0.0896	0898	0900	0901	0903	0905	0907	0909	0911	0913	
37	0.0915	0917	0918	0920	0922	0924	0926	0928	0930	0932	
38	0.0934	0936	0938	0940	0942	0944	0945	0947	0949	0951	
39	0.0953	0955	0957	0959	0961	0963	0965	0967	0969	0971	
9.40	0.0973	0975	0977	0979	0981	0983	0985	0987	0989	0991	
41	0.0993	0996	0998	1000	1002	1004	1006	1008	1010	1012	
42	0.1014	1016	1018	1020	1022	1025	1027	1029	1031	1033	
43	0.1035	1037	1039	1042	1044	1046	1048	1050	1052	1054	
44	0.1057	1059	1061	1063	1065	1067	1070	1072	1074	1076	
45	0.1078	1081	1083	1085	1087	1089	1092	1094	1096	1098	
46	0.1101	1103	1105	1107	1110	1112	1114	1116	1119	1121	
47	0.1123	1125	1128	1130	1132	1135	1137	1139	1141	1144	
48	0.1146	1148	1151	1153	1155	1158	1160	1162	1165	1167	
49	0.1169	1172	1174	1177	1179	1181	1184	1186	1189	1191	
9.50	0.1193	1196	1198	1201	1203	1205	1208	1210	1213	1215	
A	B 0	1	2	3	4	5	6	7	8	9	

A	B 0	1	2	3	4	5	6	7	8	9	P. P.
9.50	0.1193	1196	1198	1201	1203	1205	1208	1210	1213	1215	
51	0.1218	1220	1222	1225	1227	1230	1232	1235	1237	1240	
52	0.1242	1245	1247	1250	1252	1255	1257	1260	1262	1265	
53	0.1267	1270	1272	1275	1277	1280	1283	1285	1288	1290	
54	0.1293	1295	1298	1301	1303	1306	1308	1311	1314	1316	
55	0.1319	1321	1324	1327	1329	1332	1335	1337	1340	1343	
56	0.1345	1348	1351	1353	1356	1359	1361	1364	1367	1369	
57	0.1372	1375	1377	1380	1383	1386	1388	1391	1394	1397	4
58	0.1399	1402	1405	1408	1410	1413	1416	1419	1422	1424	1 0.4
59	0.1427	1430	1433	1436	1438	1441	1444	1447	1450	1453	2 0.8
9.60	0.1455	1458	1461	1464	1467	1470	1473	1475	1478	1481	3 1.2
61	0.1484	1487	1490	1493	1496	1499	1502	1504	1507	1510	4 1.6
62	0.1513	1516	1519	1522	1525	1528	1531	1534	1537	1540	5 2.0
63	0.1543	1546	1549	1552	1555	1558	1561	1564	1567	1570	6 2.4
64	0.1573	1576	1579	1582	1585	1588	1591	1594	1598	1601	7 2.8
65	0.1604	1607	1610	1613	1616	1619	1622	1625	1629	1632	8 3.2
66	0.1635	1638	1641	1644	1647	1651	1654	1657	1660	1663	9 3.6
67	0.1666	1670	1673	1676	1679	1682	1686	1689	1692	1695	
68	0.1699	1702	1705	1708	1712	1715	1718	1721	1725	1728	
69	0.1731	1735	1738	1741	1744	1748	1751	1754	1758	1761	
9.70	0.1764	1768	1771	1774	1778	1781	1784	1788	1791	1795	
71	0.1798	1801	1805	1808	1812	1815	1818	1822	1825	1829	
72	0.1832	1836	1839	1842	1846	1849	1853	1856	1860	1863	5
73	0.1867	1870	1874	1877	1881	1884	1888	1891	1895	1898	1 0.5
74	0.1902	1906	1909	1913	1916	1920	1923	1927	1931	1934	2 1.0
75	0.1938	1941	1945	1949	1952	1956	1959	1963	1967	1970	3 1.5
76	0.1974	1978	1981	1985	1989	1992	1996	2000	2003	2007	4 2.0
77	0.2011	2015	2018	2022	2026	2029	2033	2037	2041	2044	5 2.5
78	0.2048	2052	2056	2059	2063	2067	2071	2075	2078	2082	6 3.0
79	0.2086	2090	2094	2097	2101	2105	2109	2113	2117	2121	7 3.5
9.80	0.2124	2128	2132	2136	2140	2144	2148	2152	2156	2159	8 4.0
81	0.2163	2167	2171	2175	2179	2183	2187	2191	2195	2199	9 4.5
82	0.2203	2207	2211	2215	2219	2223	2227	2231	2235	2239	
83	0.2243	2247	2251	2255	2259	2263	2267	2271	2275	2279	
84	0.2284	2288	2292	2296	2300	2304	2308	2312	2316	2321	
85	0.2325	2329	2333	2337	2341	2346	2350	2354	2358	2362	
86	0.2366	2371	2375	2379	2383	2388	2392	2396	2400	2405	
87	0.2409	2413	2417	2422	2426	2430	2434	2439	2443	2447	6
88	0.2452	2456	2460	2465	2469	2473	2478	2482	2486	2491	1 0.6
89	0.2495	2499	2504	2508	2513	2517	2521	2526	2530	2535	2 1.2
9.90	0.2539	2543	2548	2552	2557	2561	2566	2570	2575	2579	3 1.8
91	0.2584	2588	2593	2597	2602	2606	2611	2615	2620	2624	4 2.4
92	0.2629	2633	2638	2642	2647	2651	2656	2661	2665	2670	5 3.0
93	0.2674	2679	2684	2688	2693	2697	2702	2707	2711	2716	6 3.6
94	0.2721	2725	2730	2735	2739	2744	2749	2753	2758	2763	7 4.2
95	0.2767	2772	2777	2782	2786	2791	2796	2801	2806	2810	8 4.8
96	0.2815	2820	2824	2829	2834	2839	2844	2848	2853	2858	9 5.4
97	0.2863	2868	2873	2877	2882	2887	2892	2897	2902	2907	
98	0.2911	2916	2921	2926	2931	2936	2941	2946	2951	2956	
99	0.2961	2966	2970	2975	2980	2985	2990	2995	3000	3005	
10.00	0.3010	3015	3020	3025	3030	3035	3040	3045	3050	3056	
A	B 0	1	2	3	4	5	6	7	8	9	

A	B 0	1	2	3	4	5	6	7	8	9	P. P.
0.00	0.3010	3015	3020	3025	3030	3035	3040	3045	3050	3056	
01	0.3061	3066	3071	3076	3081	3086	3091	3096	3101	3106	
02	0.3111	3117	3122	3127	3132	3137	3142	3147	3153	3158	
03	0.3163	3168	3173	3178	3184	3189	3194	3199	3204	3210	
04	0.3215	3220	3225	3231	3236	3241	3246	3252	3257	3262	
05	0.3267	3273	3278	3283	3289	3294	3299	3305	3310	3315	
06	0.3321	3326	3331	3337	3342	3347	3353	3358	3364	3369	
07	0.3374	3380	3385	3391	3396	3401	3407	3412	3418	3423	
08	0.3429	3434	3440	3445	3451	3456	3462	3467	3473	3478	5
09	0.3484	3489	3495	3500	3506	3511	3517	3522	3528	3533	1 0.5
0.10	0.3539	3545	3551	3556	3561	3567	3573	3578	3584	3589	2 1.0
11	0.3595	3601	3606	3612	3618	3623	3629	3635	3640	3646	3 1.5
12	0.3652	3657	3663	3669	3674	3680	3686	3692	3697	3703	4 2.0
13	0.3709	3715	3720	3726	3732	3738	3743	3749	3755	3761	5 2.5
14	0.3766	3772	3778	3784	3790	3796	3801	3807	3813	3819	6 3.0
15	0.3825	3831	3836	3842	3848	3854	3860	3866	3872	3878	7 3.5
16	0.3884	3889	3895	3901	3907	3913	3919	3925	3931	3937	8 4.0
17	0.3943	3949	3955	3961	3967	3973	3979	3985	3991	3997	9 4.5
18	0.4003	4009	4015	4021	4027	4033	4039	4045	4051	4057	
19	0.4063	4069	4076	4082	4088	4094	4100	4106	4112	4118	
0.20	0.4124	4131	4137	4143	4149	4155	4161	4167	4174	4180	
21	0.4186	4192	4198	4205	4211	4217	4223	4229	4236	4242	

Hier ist, wenn a > b, abweichend von dem Vorigen

für Summen	für Differenzen
wenn log. a — log. b = A	wenn log. a — log. b = B
log. (a + b) = log. b + B	log. (a — b) = log. b + A.

6
1 0.6
2 1.2
3 1.8
4 2.4
5 3.0
6 3.6
7 4.2
8 4.8
9 5.4

TAFEL VI.

Subtraktions-Logarithmen,

wenn die Differenz der gegebenen Logarithmen grösser als 0,4200 ist.

Formel. Gegeben: log. a und log. b, wo log. a > log. b, so ist, wenn log. a — log. b. = B gesetzt wird, log. (a — b) = log. a + C — 10.

B	C 0	1	2	3	4	5	6	7	8	9	P. P.
0.40	9.7795	7802	7808	7815	7821	7828	7834	7841	7847	7854	
41	9.7860	7866	7873	7879	7885	7892	7898	7904	7910	7916	
42	9.7923	7929	7935	7941	7947	7953	7959	7965	7971	7977	
43	9.7983	7989	7995	8000	8006	8012	8018	8024	8029	8035	
44	9.8041	8047	8052	8058	8064	8069	8075	8080	8086	8091	
45	9.8097	8102	8108	8113	8119	8124	8129	8135	8140	8146	
46	9.8151	8156	8161	8167	8172	8177	8182	8188	8193	8198	
47	9.8203	8208	8213	8218	8223	8228	8233	8238	8243	8248	
48	9.8253	8258	8263	8268	8273	8278	8283	8288	8292	8297	
49	9.8302	8307	8312	8316	8321	8326	8330	8335	8340	8344	
0.50	9.8349	8354	8358	8363	8367	8372	8377	8381	8386	8390	
B	C 0	1	2	3	4	5	6	7	8	9	

7
1 0.7
2 1.4
3 2.1
4 2.8
5 3.5
6 4.2
7 4.9
8 5.6
9 6.3

B	C 0	1	2	3	4	5	6	7	8	9	P. P.
0.50	9.8349	8354	8358	8363	8367	8372	8377	8381	8386	8390	
51	9.8395	8399	8404	8408	8412	8417	8421	8426	8430	8434	
52	9.8439	8443	8447	8451	8456	8460	8464	8469	8473	8477	
53	9.8481	8485	8489	8494	8498	8502	8506	8510	8514	8518	
54	9.8522	8526	8530	8534	8538	8542	8546	8550	8554	8558	
55	9.8562	8566	8570	8574	8578	8582	8586	8589	8593	8597	
56	9.8601	8605	8608	8612	8616	8620	8623	8627	8631	8635	
57	9.8638	8642	8646	8649	8653	8657	8660	8664	8667	8671	
58	9.8675	8678	8682	8685	8689	8692	8696	8699	8703	8706	5
59	9.8710	8713	8717	8720	8723	8727	8730	8734	8737	8740	1 0.5 2 1.0
0.60	9.8744	8747	8750	8754	8757	8760	8764	8767	8770	8774	3 1.5 4 2.0
61	9.8777	8780	8783	8786	8790	8793	8796	8799	8802	8806	5 2.5 6 3.0
62	9.8809	8812	8815	8818	8821	8824	8828	8831	8834	8837	7 3.5 8 4.0
63	9.8840	8843	8846	8849	8852	8855	8858	8861	8864	8867	9 4.5
64	9.8870	8873	8876	8879	8882	8885	8888	8891	8894	8896	
65	9.8899	8902	8905	8908	8911	8914	8916	8919	8922	8925	
66	9.8928	8931	8933	8936	8939	8942	8944	8947	8950	8953	
67	9.8955	8958	8961	8963	8966	8969	8972	8974	8977	8980	
68	9.8982	8985	8987	8990	8993	8995	8998	9000	9003	9006	
69	9.9008	9011	9013	9016	9018	9021	9023	9026	9028	9031	
0.70	9.9033	9036	9038	9041	9043	9046	9048	9051	9053	9056	
71	9.9058	9060	9063	9065	9068	9070	9072	9075	9077	9080	
72	9.9082	9084	9087	9089	9091	9094	9096	9098	9101	9103	4
73	9.9105	9107	9110	9112	9114	9116	9119	9121	9123	9125	1 0.4 2 0.8
74	9.9128	9130	9132	9134	9137	9139	9141	9143	9145	9147	3 1.2 4 1.6
75	9.9150	9152	9154	9156	9158	9160	9162	9165	9167	9169	5 2.0 6 2.4
76	9.9171	9173	9175	9177	9179	9181	9183	9186	9188	9190	7 2.8 8 3.2
77	9.9192	9194	9196	9198	9200	9202	9204	9206	9208	9210	9 3.6
78	9.9212	9214	9216	9218	9220	9222	9224	9226	9228	9230	
79	9.9232	9233	9235	9237	9239	9241	9243	9245	9247	9249	
0.80	9.9251	9252	9254	9256	9258	9260	9262	9264	9265	9267	
81	9.9269	9271	9273	9275	9276	9278	9280	9282	9284	9285	
82	9.9287	9289	9291	9293	9294	9296	9298	9300	9301	9303	
83	9.9305	9307	9308	9310	9312	9313	9315	9317	9319	9320	
84	9.9322	9324	9325	9327	9329	9330	9332	9334	9335	9337	
85	9.9339	9340	9342	9344	9345	9347	9348	9350	9352	9353	
86	9.9355	9356	9358	9360	9361	9363	9364	9366	9368	9369	
87	9.9371	9372	9374	9375	9377	9378	9380	9381	9383	9385	3
88	9.9386	9388	9389	9391	9392	9394	9395	9397	9398	9400	1 0.3 2 0.6
89	9.9401	9403	9404	9405	9407	9408	9410	9411	9413	9414	3 0.9 4 1.2
0.90	9.9416	9417	9419	9420	9421	9423	9424	9426	9427	9428	5 1.5 6 1.8
91	9.9430	9431	9433	9434	9435	9437	9438	9440	9441	9442	7 2.1 8 2.4
92	9.9444	9445	9446	9448	9449	9450	9452	9453	9455	9456	9 2.7
93	9.9457	9459	9460	9461	9462	9464	9465	9466	9468	9469	
94	9.9470	9472	9473	9474	9476	9477	9478	9479	9481	9482	
95	9.9483	9484	9486	9487	9488	9489	9491	9492	9493	9494	
96	9.9496	9497	9498	9499	9501	9502	9503	9504	9505	9507	
97	9.9508	9509	9510	9511	9513	9514	9515	9516	9517	9518	
98	9.9520	9521	9522	9523	9524	9525	9527	9528	9529	9530	
99	9.9531	9532	9533	9535	9536	9537	9538	9539	9540	9541	
1.00	9.9542	9544	9545	9546	9547	9548	9549	9550	9551	9552	
B	C 0	1	2	3	4	5	6	7	8	9	

B	C 0	1	2	3	4	5	6	7	8	9	P.	P.
1.00	9.9542	9544	9545	9546	9547	9548	9549	9550	9551	9552		
01	9.9553	9554	9556	9557	9558	9559	9560	9561	9562	9563		
02	9.9564	9565	9566	9567	9568	9569	9570	9571	9572	9573		
03	9.9575	9576	9577	9578	9579	9580	9581	9582	9583	9584		
04	9.9585	9586	9587	9588	9589	9590	9591	9592	9593	9594		
05	9.9595	9596	9597	9598	9598	9599	9600	9601	9602	9603		
06	9.9604	9605	9606	9607	9608	9609	9610	9611	9612	9613		7
07	9.9614	9615	9616	9616	9617	9618	9619	9620	9621	9622	1	0.7
08	9.9623	9624	9625	9626	9626	9627	9628	9629	9630	9631	2	1.4
09	9.9632	9633	9634	9634	9635	9636	9637	9638	9639	9640	3	2.1
1.10	9.9641	9641	9642	9643	9644	9645	9646	9647	9647	9648	4	2.8
11	9.9649	9650	9651	9652	9652	9653	9654	9655	9656	9657	5	3.5
12	9.9657	9658	9659	9660	9661	9661	9662	9663	9664	9665	6	4.2
13	9.9665	9666	9667	9668	9669	9669	9670	9671	9672	9673	7	4.9
14	9.9673	9674	9675	9676	9677	9677	9678	9679	9680	9680	8	5.6
15	9.9681	9682	9683	9683	9684	9685	9686	9686	9687	9688	9	6.3
16	9.9689	9689	9690	9691	9692	9692	9693	9694	9695	9695		
17	9.9696	9697	9697	9698	9699	9700	9700	9701	9702	9702		
18	9.9703	9704	9705	9705	9706	9707	9707	9708	9709	9709		6
19	9.9710	9711	9712	9712	9713	9714	9714	9715	9716	9716	1	0.6
1.20	9.9717	9718	9718	9719	9720	9720	9721	9722	9722	9723	2	1.2
1.2	9.9717	9724	9730	9736	9743	9749	9755	9760	9766	9771	3	1.8
3	9.9777	9782	9787	9792	9797	9802	9806	9811	9815	9819	4	2.4
4	9.9824	9828	9832	9836	9839	9843	9847	9850	9854	9857	5	3.0
5	9.9860	9864	9867	9870	9873	9876	9879	9882	9884	9887	6	3.6
6	9.9890	9892	9895	9897	9899	9902	9904	9906	9908	9910	7	4.2
7	9.9912	9914	9916	9918	9920	9922	9924	9926	9927	9929	8	4.8
8	9.9931	9932	9934	9935	9937	9938	9940	9941	9942	9944	9	5.4
9	9.9945	9946	9947	9949	9950	9951	9952	9953	9954	9955		
2.0	9.9956	9957	9958	9959	9960	9961	9962	9963	9964	9965		
1	9.9965	9966	9967	9968	9968	9969	9970	9971	9971	9972		5
2	9.9973	9973	9974	9974	9975	9976	9976	9977	9977	9978	1	0.5
3	9.9978	9979	9979	9980	9980	9981	9981	9981	9982	9982	2	1.0
4	9.9983	9983	9983	9984	9984	9985	9985	9985	9986	9986	3	1.5
5	9.9986	9987	9987	9987	9987	9988	9988	9988	9989	9989	4	2.0
6	9.9989	9989	9990	9990	9990	9990	9990	9991	9991	9991	5	2.5
7	9.9991	9992	9992	9992	9992	9992	9992	9993	9993	9993	6	3.0
8	9.9993	9993	9993	9994	9994	9994	9994	9994	9994	9994	7	3.5
9	9.9995	9995	9995	9995	9995	9995	9995	9995	9995	9996	8	4.0
3.	9.9996	9997	9997	9998	9998	9999	9999	9999	9999	9999	9	4.5
4.	10.0000											

TAFEL VII.

DIE NATÜRLICHEN

SINUS UND TANGENTEN

FÜR

JEDEN ZEHNTELGRAD

DES

QUADRANTEN.

Grade	Sinus.	d.	Tang.	d.	Cotang.	d.	Cosin.	d.		P. P.
0.0	0.0000		0.0000		inf.		1.0000		90.0	
		17		17				0		
1	0.0017		0.0017		572.9572		1.0000		9	
2	0.0035	18	0.0035	18	286.4777		1.0000	0	8	
3	0.0052	17	0.0052	17	190.9842		1.0000	0	7	
		18		18				0		
4	0.0070		0.0070		143.2371		1.0000		6	
5	0.0087	17	0.0087	17	114.5887		1.0000	0	5	
6	0.0105	18	0.0105	18	95.4895		0.9999	1	4	
		17		17				0		
7	0.0122		0.0122		81.8470		0.9999		3	
8	0.0140	18	0.0140	18	71.6151		0.9999	0	2	
9	0.0157	17	0.0157	17	63.6567		0.9999	0	1	
		18		18				1		
1.0	0.0175		0.0175		57.2900		0.9998		89.0	
		17		17				0		
1	0.0192		0.0192		52.0807		0.9998		9	
2	0.0209	17	0.0209	17	47.7395		0.9998	0	8	
3	0.0227	18	0.0227	18	44.0661		0.9997	1	7	18
		17		17				0		1 1.8
4	0.0244		0.0244		40.9174		0.9997		6	2 3.6
5	0.0262	18	0.0262	18	38.1885		0.9997	0	5	3 5.4
6	0.0279	17	0.0279	17	35.8006		0.9996	1	4	4 7.2
		18		18				0		5 9.0
7	0.0297		0.0297		33.6935		0.9996		3	6 10.8
8	0.0314	17	0.0314	17	31.8205		0.9995	1	2	7 12.6
9	0.0332	18	0.0332	18	30.1446		0.9995	0	1	8 14.4
		17		17				1		9 16.2
2.0	0.0349		0.0349		28.6363		0.9994		88.0	
		17		18				1		
1	0.0366		0.0367		27.2715		0.9993		9	
2	0.0384	18	0.0384	17	26.0307		0.9993	0	8	
3	0.0401	17	0.0402	18	24.8978		0.9992	1	7	
		18		17				1		
4	0.0419		0.0419		23.8593		0.9991		6	
5	0.0436	17	0.0437	18	22.9038	9555	0.9990	1	5	
6	0.0454	18	0.0454	17	22.0217	8821	0.9990	0	4	
		17		18		8168		1		
7	0.0471		0.0472		21.2049		0.9989		3	
8	0.0488	17	0.0489	17	20.4465	7584	0.9988	1	2	
9	0.0506	18	0.0507	18	19.7403	7062	0.9987	1	1	
		17		17		6592		1		
3.0	0.0523		0.0524		19.0811		0.9986		87.0	
		18		18		6166		1		
1	0.0541		0.0542		18.4645		0.9985		9	
2	0.0558	17	0.0559	17	17.8863	5782	0.9984	1	8	17
3	0.0576	18	0.0577	18	17.3432	5431	0.9983	1	7	1 1.7
		17		17		5113		1		2 3.4
4	0.0593		0.0594		16.8319		0.9982		6	3 5.1
5	0.0610	17	0.0612	18	16.3499	4820	0.9981	1	5	4 6.8
6	0.0628	18	0.0629	17	15.8945	4554	0.9980	1	4	5 8.5
		17		18		4307		1		6 10.2
7	0.0645		0.0647		15.4638		0.9979		3	7 11.9
8	0.0663	18	0.0664	17	15.0557	4081	0.9978	1	2	8 13.6
9	0.0680	17	0.0682	18	14.6685	3872	0.9977	1	1	9 15.3
		18		17		3678		1		
4.0	0.0698		0.0699		14.3007		0.9976		86.0	
		17		18		3500		2		
1	0.0715		0.0717		13.9507		0.9974		9	
2	0.0732	17	0.0734	17	13.6174	3333	0.9973	1	8	
3	0.0750	18	0.0752	18	13.2995	3179	0.9972	1	7	
		17		17		3033		1		
4	0.0767		0.0769		12.9962		0.9971		6	
5	0.0785	18	0.0787	18	12.7062	2900	0.9969	2	5	
6	0.0802	17	0.0805	18	12.4288	2774	0.9968	1	4	
		17		17		2666		2		
7	0.0819		0.0822		12.1622		0.9966		3	
8	0.0837	18	0.0840	18	11.9087	2535	0.9965	1	2	
9	0.0854	17	0.0857	17	11.6645	2442	0.9963	2	1	
		18		18		2344		1		
5.0	0.0872		0.0875		11.4301		0.9962		85.0	
	Cosin.	d.	Cotang.	d.	Tang.	d.	Sinus.	d.	Grade	

Grade	Sinus.	d.	Tang.	d.	Cotang.	d.	Cosin.	d.		P. P.
5.0	0.0872		0.0875		11.4301		0.9962		85.0	
		17		17		2253		2		
1	0.0889		0.0892		11.2048		0.9960		9	
		17		18		2166		1		
2	0.0906		0.0910		10.9882		0.9959		8	
		18		18		2085		2		
3	0.0924		0.0928		10.7797		0.9957		7	
		17		17		2008		1		
4	0.0941		0.0945		10 5789		0.9956		6	
		17		18		1935		2		
5	0.0958		0.0963		10.3854		0.9954		5	
		18		18		1866		2		
6	0.0976		0.0981		10.1988		0.9952		4	
		17		17		1801		1		
7	0.0993		0.0998		10.0187		0.9951		3	
		18		18		1739		2		
8	0.1011		0.1016		9.8448		0.9949		2	
		17		17		1680		2		
9	0.1028		0.1033		9.6768		0.9947		1	
		17		18		1624		2		
6.0	0.1045		0.1051		9.5144		0.9945		84.0	
		18		18		1572		2		
1	0.1063		0.1069		9.3572		0 9943		9	
		17		17		1520		1		
2	0.1080		0.1086		9.2052		0.9942		8	
		17		18		1473		2		
3	0.1097		0.1104		9.0579		0.9940		7	18
		18		18		1427		2	1	1.8
4	0.1115		0.1122		8.9152		0.9938		6	2 3.6
		17		17		1383		2	3	5.4
5	0.1132		0.1139		8.7769		0.9936		5	4 7.2
		17		18		1342		2	4	9.0
6	0.1149		0.1157		8.6427		0.9934		5	5 10.8
		18		18		1301		2	6	12.6
7	0.1167		0.1175		8.5126		0.9932		3	7 14.4
		17		17		1263		2	2	8 16.2
8	0.1184		0.1192		8.3863		0.9930		2	9
		17		18		1227		2		
9	0.1201		0.1210		8.2636		0.9928		1	
		18		18		1193		3		
7.0	0.1219		0 1228		8.1443		0.9925		83.0	
		17		18		1158		2		
1	0.1236		0.1246		8.0285		0.9923		9	
		17		17		1127		2		
2	0.1253		0.1263		7.9158		0.9921		8	
		18		18		1096		2		
3	0.1271		0.1281		7.8062		0.9919		7	
		17		18		1066		2		
4	0.1288		0.1299		7.6996		0.9917		6	
		17		18		1038		3		
5	0.1305		0.1317		7.5958		0.9914		5	
		18		17		1011		2		
6	0.1323		0.1334		7.4947		0.9912		4	
		17		18		985		2		
7	0.1340		0.1352		7.3962		0.9910		3	
		17		18		960		3		
8	0.1357		0.1370		7.3002		0.9907		2	
		17		18		936		2		
9	0 1374		0.1388		7.2066		0.9905		1	
		18		17		912		2		
8.0	0.1392		0.1405		7.1154		0.9903		82.0	
		17		18		890		3		
1	0.1409		0.1423		7.0264		0.9900		9	
		17		18		869		2		
2	0.1426		0.1441		6.9395		0.9898		8	17
		18		18		847		3		
3	0.1444		0.1459		6.8548		0.9895		7	1 1.7
		17		18		828		2	2	3.4
4	0.1461		0.1477		6.7720		0.9893		6	3 5.1
		17		18		808		3		4 6.8
5	0.1478		0.1495		6.6912		0.9890		5	5 8.5
		17		17		790		2		6 10.2
6	0.1495		0.1512		6.6122		0.9888		4	7 11.9
		18		18		772		3		8 13.6
7	0.1513		0.1530		6.5350		0.9885		3	9 15.3
		17		18		754		3		
8	0.1530		0 1548		6.4596		0.9882		2	
		17		18		737		2		
9	0.1547		0.1566		6.3859		0.9880		1	
		17		18		721		3		
9.0	0.1564		0.1584		6.3138		0.9877		81.0	
		18		18		706		3		
1	0.1582		0.1602		6.2432		0.9874		9	
		17		18		690		3		
2	0.1599		0.1620		6.1742		0.9871		8	
		17		18		676		2		
3	0.1616		0.1638		6.1066		0.9869		7	
		17		17		661		3		
4	0.1633		0.1655		6.0405		0.9866		6	
		17		18		647		3		
5	0.1650		0.1673		5.9758		0.9863		5	
		18		18		634		3		
6	0.1668		0.1691		5.9124		0.9860		4	
		17		18		622		3		
7	0.1685		0.1709		5.8502		0.9857		3	
		17		18		608		3		
8	0.1702		0.1727		5.7894		0.9854		2	
		17		18		597		3		
9	0.1719		0.1745		5.7297		0.9851		1	
		17		18		584		3		
10.0	0.1736		0.1763		5.6713		0.9848		80.0	
	Cosin.	d.	Cotang.	d.	Tang.	d.	Sinus.	d.	Grade	

Grade	Sinus.	d.	Tang.	d.	Cotang.	d.	Cosin.	d.		P. P.
10.0	0.1736	18	0.1763	18	5.6713	573	0.9848	3	80.0	
1	0.1754	17	0.1781	18	5.6140	562	0.9845	3	9	
2	0.1771	17	0.1799	18	5.5578	552	0.9842	3	8	
3	0.1788	17	0.1817	18	5.5026	540	0.9839	3	7	
4	0.1805	17	0.1835	18	5.4486	531	0.9836	3	6	
5	0.1822	18	0.1853	18	5.3955	520	0.9833	4	5	
6	0.1840	17	0.1871	19	5.3435	511	0.9829	3	4	
7	0.1857	17	0.1890	18	5.2924	502	0.9826	3	3	19
8	0.1874	17	0.1908	18	5.2422	493	0.9823	3	2	1 1.9
9	0.1891	17	0.1926	18	5.1929	483	0.9820	4	1	2 3.8
11.0	0.1908	17	0.1944	18	5.1446	476	0.9816	3	79.0	3 5.7
1	0.1925	17	0.1962	18	5.0970	466	0.9813	3	9	4 7.6
2	0.1942	17	0.1980	18	5.0504	459	0.9810	3	8	5 9.5
3	0.1959	18	0.1998	18	5.0045	451	0.9806	4	7	6 11.4
4	0.1977	17	0.2016	19	4.9594	442	0.9803	3	6	7 13.3
5	0.1994	17	0.2035	18	4.9152	436	0.9799	4	5	8 15.2
6	0.2011	17	0.2053	18	4.8716	428	0.9796	3	4	9 17.1
7	0.2028	17	0.2071	18	4.8288	421	0.9792	4	3	
8	0.2045	17	0.2089	18	4.7867	414	0.9789	3	2	
9	0.2062	17	0.2107	19	4.7453	407	0.9785	4	1	
12.0	0.2079	17	0.2126	18	4.7046	400	0.9781	4	78.0	
1	0.2096	17	0.2144	18	4.6646	394	0.9778	3	9	
2	0.2113	17	0.2162	18	4.6252	388	0.9774	4	8	18
3	0.2130	17	0.2180	19	4.5864	381	0.9770	4	7	1 1.8
4	0.2147	17	0.2199	18	4.5483	376	0.9767	3	6	2 3.6
5	0.2164	17	0.2217	18	4.5107	370	0.9763	4	5	3 5.4
6	0.2181	17	0.2235	19	4.4737	364	0.9759	4	4	4 7.2
7	0.2198	17	0.2254	18	4.4373	358	0.9755	4	3	5 9.0
8	0.2215	18	0.2272	18	4.4015	353	0.9751	4	2	6 10.8
9	0.2233	17	0.2290	19	4.3662	347	0.9748	3	1	7 12.6
13.0	0.2250	17	0.2309	18	4.3315	343	0.9744	4	77.0	8 14.4
1	0.2267	17	0.2327	18	4.2972	337	0.9740	4	9	9 16.2
2	0 2284	16	0.2345	19	4.2635	332	0.9736	4	8	
3	0.2300	17	0.2364	18	4.2303	327	0.9732	4	7	
4	0.2317	17	0.2382	19	4.1976	323	0.9728	4	6	
5	0.2334	17	0.2401	18	4.1653	318	0.9724	4	5	
6	0.2351	17	0.2419	19	4.1335	313	0.9720	5	4	
7	0.2368	17	0.2438	18	4.1022	309	0.9715	4	3	17
8	0.2385	17	0.2456	19	4.0713	305	0.9711	4	2	1 1.7
9	0.2402	17	0.2475	18	4.0408	300	0.9707	4	1	2 3.4
14.0	0.2419	17	0.2493	19	4.0108	296	0.9703	4	76.0	3 5.1
1	0.2436	17	0.2512	18	3.9812	292	0.9699	4	9	4 6.8
2	0.2453	17	0.2530	19	3.9520	288	0.9694	5	8	5 8.5
3	0.2470	17	0.2549	19	3.9232	285	0.9690	4	7	6 10.2
4	0.2487	17	0.2568	18	3.8947	280	0.9686	5	6	7 11.9
5	0.2504	17	0.2586	19	3.8667	276	0.9681	4	5	8 13.6
6	0.2521	17	0.2605	18	3.8391	273	0.9677	4	4	9 15.3
7	0.2538	16	0.2623	19	3.8118	270	0.9673	5	3	
8	0.2554	17	0.2642	19	3.7848	265	0.9668	4	2	
9	0.2571	17	0.2661	18	3.7583	262	0.9664	5	1	
15.0	0.2588		0.2679		3.7321		0.9659		75.0	
	Cosin.	d.	Cotang.	d.	Tang.	d.	Sinus.	d.	Grade	

Grade	Sinus.	d.	Tang.	d.	Cotang.	d.	Cosin.	d.		P. P.
15.0	0.2588		0.2679		3.7321		0.9659		75.0	
		17		19		259		4		
1	0.2605		0.2698		3.7062		0.9655		9	
		17		19		256		5		
2	0.2622		0.2717		3.6806		0.9650		8	
		17		19		252		4		
3	0.2639		0.2736		3.6554		0.9646		7	
		17		18		249		5		
4	0.2656		0.2754		3.6305		0.9641		6	
		16		19		246		5		19
5	0.2672		0.2773		3.6059		0.9636		5	1 1.9
		17		19		243		4		2 3.8
6	0.2689		0.2792		3.5816		0.9632		4	3 5.7
		17		19		240		5		4 7.6
7	0.2706		0.2811		3.5576		0.9627		3	5 9.5
		17		19		237		5		6 11.4
8	0.2723		0.2830		3.5339		0.9622		2	7 13.3
		17		19		234		5		8 15.2
9	0.2740		0.2849		3.5105		0.9617		1	9 17.1
		16		18		231		4		
16.0	0.2756		0.2867		3.4874		0.9613		74.0	
		17		19		228		5		
1	0.2773		0.2886		3.4646		0.9608		9	
		17		19		226		5		
2	0.2790		0.2905		3.4420		0.9603		8	
		17		19		223		5		
3	0.2807		0.2924		3.4197		0.9598		7	
		16		19		220		5		
4	0.2823		0.2943		3.3977		0.9593		6	
		17		19		218		5		
5	0.2840		0.2962		3.3759		0.9588		5	
		17		19		215		5		
6	0.2857		0.2981		3.3544		0 9583		4	
		17		19		212		5		18
7	0.2874		0 3000		3.3332		0.9578		3	1 1.8
		16		19		210		5		2 3.6
8	0.2890		0.3019		3.3122		0.9573		2	3 5.4
		17		19		208		5		4 7.2
9	0.2907		0.3038		3.2914		0.9568		1	5 9.0
		17		19		205		5		6 10.8
17.0	0.2924		0.3057		3.2709		0.9563		73.0	7 12.6
		16		19		203		5		8 14.4
1	0.2940		0.3076		3.2506		0.9558		9	9 16.2
		17		20		201		5		
2	0.2957		0.3096		3.2305		0.9553		8	
		17		19		199		5		
3	0.2974		0.3115		3.2106		0.9548		7	
		16		19		196		6		
4	0.2990		0.3134		3.1910		0.9542		6	
		17		19		194		5		
5	0.3007		0.3153		3.1716		0.9537		5	
		17		19		192		5		
6	0.3024		0.3172		3.1524		0.9532		4	
		16		19		190		5		
7	0.3040		0.3191		3.1334		0.9527		3	
		17		20		188		6		17
8	0.3057		0.3211		3.1146		0.9521		2	1 1.7
		17		19		185		5		2 3.4
9	0.3074		0.3230		3.0961		0.9516		1	3 5.1
		16		19		184		5		4 6.8
18.0	0.3090		0.3249		3.0777		0.9511		72.0	5 8.5
		17		20		182		6		6 10.2
1	0.3107		0.3269		3.0595		0.9505		9	7 11.9
		16		19		180		5		8 13.6
2	0.3123		0.3288		3.0415		0.9500		8	9 15.3
		17		19		178		6		
3	0.3140		0.3307		3.0237		0.9494		7	
		16		20		176		5		
4	0.3156		0.3327		3.0061		0.9489		6	
		17		19		174		6		
5	0.3173		0.3346		2.9887		0.9483		5	
		17		19		173		5		
6	0.3190		0.3365		2.9714		0.9478		4	
		16		20		170		6		
7	0.3206		0.3385		2.9544		0.9472		3	
		17		19		169		6		
8	0.3223		0.3404		2.9375		0.9466		2	
		16		20		167		5		
9	0.3239		0.3424		2.9208		0.9461		1	
		17		19		166		6		16
19.0	0.3256		0.3443		2.9042		0.9455		71.0	1 1.6
		16		20		164		6		2 3.2
1	0.3272		0.3463		2.8878		0.9449		9	3 4.8
		17		19		162		5		4 6.4
2	0.3289		0.3482		2.8716		0.9444		8	5 8.0
		16		20		160		6		6 9.6
3	0.3305		0.3502		2.8556		0.9438		7	7 11.2
		17		20		159		6		8 12.8
4	0.3322		0.3522		2.8397		0.9432		6	9 14.4
		16		19		158		6		
5	0.3338		0.3541		2.8239		0.9426		5	
		17		20		156		5		
6	0.3355		0.3561		2.8083		0.9421		4	
		16		20		154		6		
7	0.3371		0.3581		2.7929		0.9415		3	
		16		19		153		6		
8	0.3387		0.3600		2.7776		0.9409		2	
		17		20		151		6		
9	0.3404		0.3620		2.7625		0.9403		1	
		16		20		150		6		
20.0	0.3420		0.3640		2.7475		0.9397		70.0	
	Cosin.	d.	Cotang.	d.	Tang.	d.	Sinus.	d.	Grade	

Grade	Sinus.	d.	Tang.	d.	Cotang.	d.	Cosin.	d.		P. P.
20.0	0.3420	17	0.3640	19	2.7475	149	0.9397	6	70.0	
1	0.3437	16	0.3659	20	2.7326	147	0.9391	6	9	
2	0.3453	16	0.3679	20	2.7179	145	0.9385	6	8	
3	0.3469	17	0.3699	20	2.7034	145	0.9379	6	7	
4	0.3486	16	0.3719	20	2.6889	143	0.9373	6	6	
5	0.3502	16	0.3739	20	2.6746	141	0.9367	6	5	22
6	0.3518	17	0.3759	20	2.6605	141	0.9361	7	4	1 2.2
7	0.3535	16	0.3779	20	2.6464	139	0.9354	6	3	2 4.4
8	0.3551	16	0.3799	20	2.6325	138	0.9348	6	2	3 6.6
9	0.3567	17	0.3819	20	2.6187	136	0.9342	6	1	4 8.8
21.0	0.3584	16	0.3839	20	2.6051	135	0.9336	6	69.0	5 11.0
1	0.3600	16	0.3859	20	2.5916	134	0.9330	7	9	6 13.2
2	0.3616	16	0.3879	20	2.5782	133	0.9323	6	8	7 15.4
3	0.3633	17	0.3899	20	2.5649	132	0.9317	6	7	8 17.6
4	0.3649	16	0.3919	20	2.5517	131	0.9311	7	6	9 19.8
5	0.3665	16	0.3939	20	2.5386	129	0.9304	6	5	
6	0.3681	16	0.3959	20	2.5257	128	0.9298	7	4	21
7	0.3697	17	0.3979	21	2.5129	127	0.9291	6	3	1 2.1
8	0.3714	16	0.4000	20	2.5002	126	0.9285	7	2	2 4.2
9	0.3730	16	0.4020	20	2.4876	125	0.9278	6	1	3 6.3
22.0	0.3746	16	0.4040	21	2.4751	124	0.9272	7	68.0	4 8.4
1	0.3762	16	0.4061	20	2.4627	123	0.9265	6	9	5 10.5
2	0.3778	17	0.4081	20	2.4504	121	0.9259	7	8	6 12.6
3	0.3795	16	0.4101	21	2.4383	121	0.9252	7	7	7 14.7
4	0.3811	16	0.4122	20	2.4262	120	0.9245	6	6	8 16.8
5	0.3827	16	0.4142	21	2.4142	119	0.9239	7	5	9 18.9
6	0.3843	16	0.4163	20	2.4023	117	0.9232	7	4	
7	0.3859	16	0.4183	21	2.3906	117	0.9225	6	3	
8	0.3875	16	0.4204	20	2.3789	116	0.9219	7	2	17
9	0.3891	16	0.4224	21	2.3673	114	0.9212	7	1	1 1.7
23.0	0.3907	16	0.4245	20	2.3559	114	0.9205	7	67.0	2 3.4
1	0.3923	16	0.4265	21	2.3445	113	0.9198	7	9	3 5.1
2	0.3939	16	0.4286	21	2.3332	112	0.9191	7	8	4 6.8
3	0.3955	16	0.4307	20	2.3220	111	0.9184	7	7	5 8.5
4	0.3971	16	0.4327	21	2.3109	111	0.9178	6	6	6 10.2
5	0.3987	16	0.4348	21	2.2998	109	0.9171	7	5	7 11.9
6	0.4003	16	0.4369	21	2.2889	108	0.9164	7	4	8 13.6
7	0.4019	16	0.4390	21	2.2781	108	0.9157	7	3	9 15.3
8	0.4035	16	0.4411	20	2.2673	107	0.9150	7	2	
9	0.4051	16	0.4431	21	2.2566	106	0.9143	8	1	16
24.0	0.4067	16	0.4452	21	2.2460	105	0.9135	7	66.0	1 1.6
1	0.4083	16	0.4473	21	2.2355	104	0.9128	7	9	2 3.2
2	0.4099	16	0.4494	21	2.2251	103	0.9121	7	8	3 4.8
3	0.4115	16	0.4515	21	2.2148	103	0.9114	7	7	4 6.4
4	0.4131	16	0.4536	21	2.2045	102	0.9107	7	6	5 8.0
5	0.4147	16	0.4557	21	2.1943	101	0.9100	8	5	6 9.6
6	0.4163	16	0.4578	21	2.1842	100	0.9092	7	4	7 11.2
7	0.4179	16	0.4599	22	2.1742	100	0.9085	7	3	8 12.8
8	0.4195	15	0.4621	21	2.1642	99	0.9078	8	2	9 14.4
9	0.4210	16	0.4642	21	2.1543	98	0.9070	7	1	
25.0	0.4226		0.4663		2.1445		0.9063		65.0	
	Cosin.	d.	Cotang.	d.	Tang.	d.	Sinus.	d.	Grade	

Grade	Sinus.	d.	Tang.	d.	Cotang.	d.	Cosin.	d.		P. P.
25.0	0.4226	16	0.4663	21	2.1445	97	0.9063	7	65.0	
1	0.4242	16	0.4684	22	2.1348	97	0.9056	8	9	
2	0.4258	16	0.4706	21	2.1251	96	0.9048	7	8	
3	0.4274	15	0.4727	21	2.1155	95	0.9041	8	7	
4	0.4289	16	0.4748	22	2.1060	95	0.9033	7	6	
5	0.4305	16	0.4770	21	2.0965	93	0.9026	8	5	23
6	0.4321	16	0.4791	22	2.0872	94	0.9018	7	4	1 2.3
7	0.4337	15	0.4813	21	2.0778	92	0.9011	8	3	2 4.6 3 6.9
8	0.4352	16	0.4834	22	2.0686	92	0.9003	7	2	4 9.2 5 11.5
9	0.4368	16	0.4856	21	2.0594	91	0.8996	8	1	6 13.8 7 16.1
26.0	0.4384	15	0.4877	22	2.0503	90	0.8988	8	64.0	8 18.4 9 20.7
1	0.4399	16	0.4899	22	2.0413	90	0.8980	8	9	
2	0.4415	16	0.4921	21	2.0323	90	0.8973	7	8	
3	0.4431	15	0.4942	22	2.0233	88	0.8965	8	7	
4	0.4446	16	0.4964	22	2.0145	88	0.8957	8	6	
5	0.4462	16	0.4986	22	2.0057	87	0.8949	7	5	
6	0.4478	15	0.5008	21	1.9970	87	0.8942	8	4	
7	0.4493	16	0.5029	22	1.9883	86	0.8934	8	3	22
8	0.4509	15	0.5051	22	1.9797	86	0.8926	8	2	1 2.2 2 4.4
9	0.4524	16	0.5073	22	1.9711	85	0.8918	8	1	3 6.6 4 8.8
27.0	0.4540	15	0.5095	22	1.9626	84	0.8910	8	63.0	5 11.0 6 13.2
1	0.4555	16	0.5117	22	1.9542	84	0.8902	8	9	7 15.4 8 17.6
2	0.4571	15	0.5139	22	1.9458	83	0.8894	8	8	9 19.8
3	0.4586	16	0.5161	23	1.9375	83	0.8886	8	7	
4	0.4602	15	0.5184	22	1.9292	82	0.8878	8	6	
5	0.4617	16	0.5206	22	1.9210	82	0.8870	8	5	
6	0.4633	15	0.5228	22	1.9128	81	0.8862	8	4	
7	0.4648	16	0.5250	22	1.9047	80	0.8854	8	3	
8	0.4664	15	0.5272	23	1.8967	80	0.8846	8	2	16
9	0.4679	16	0.5295	22	1.8887	80	0.8838	9	1	1 1.6 2 3.2
28.0	0.4695	15	0.5317	23	1.8807	79	0.8829	8	62.0	3 4.8 4 6.4
1	0.4710	16	0.5340	22	1.8728	78	0.8821	8	9	5 8.0 6 9.6
2	0.4726	15	0.5362	22	1.8650	78	0.8813	8	8	7 11.2 8 12.8
3	0.4741	15	0.5384	23	1.8572	77	0.8805	9	7	9 14.4
4	0.4756	16	0.5407	23	1.8495	77	0.8796	8	6	
5	0.4772	15	0.5430	22	1.8418	77	0.8788	8	5	
6	0.4787	15	0.5452	23	1.8341	76	0.8780	9	4	
7	0.4802	16	0.5475	23	1.8265	75	0.8771	8	3	
8	0.4818	15	0.5498	22	1.8190	75	0.8763	8	2	
9	0.4833	15	0.5520	23	1.8115	75	0.8755	9	1	15
29.0	0.4848	15	0.5543	23	1.8040	74	0.8746	8	61.0	1 1.5
1	0.4863	16	0.5566	23	1.7966	73	0.8738	9	9	2 3.0 3 4.5
2	0.4879	15	0.5589	23	1.7893	73	0.8729	8	8	4 6.0 5 7.5
3	0.4894	15	0.5612	23	1.7820	73	0.8721	9	7	6 9.0 7 10.5
4	0.4909	15	0.5635	23	1.7747	72	0.8712	8	6	8 12.0 9 13.5
5	0.4924	15	0.5658	23	1.7675	72	0.8704	9	5	
6	0.4939	16	0.5681	23	1.7603	71	0.8695	9	4	
7	0.4955	15	0.5704	23	1.7532	71	0.8686	8	3	
8	0.4970	15	0.5727	23	1.7461	70	0.8678	9	2	
9	0.4985	15	0.5750	24	1.7391	70	0.8669	9	1	
30.0	0.5000		0.5774		1.7321		0.8660		60.0	
	Cosin.	d.	Cotang.	d.	Tang.	d.	Sinus.	d.	Grade	

Grade	Sinus.	d.	Tang.	d.	Cotang.	d.	Cosin.	d.		P. P.
30.0	0.5000	15	0.5774	23	1.7321	70	0.8660	8	60.0	
1	0.5015	15	0.5797	23	1.7251	69	0.8652	9	9	
2	0.5030	15	0.5820	24	1.7182	69	0.8643	9	8	
3	0.5045	15	0.5844	23	1.7113	68	0.8634	9	7	24
4	0.5060	15	0.5867	23	1.7045	68	0.8625	9	6	1 2.4 2 4.8
5	0.5075	15	0.5890	24	1.6977	68	0.8616	9	5	3 7.2 4 9.6
6	0.5090	15	0.5914	24	1.6909	67	0.8607	8	4	5 12.0 6 14.4
7	0.5105	15	0.5938	23	1.6842	67	0.8599	9	3	7 16.8 8 19.2
8	0.5120	15	0.5961	24	1.6775	66	0.8590	9	2	9 21.6
9	0.5135	15	0.5985	24	1.6709	66	0.8581	9	1	
31.0	0.5150	15	0.6009	23	1.6643	66	0.8572	9	59.0	
1	0.5165	15	0.6032	24	1.6577	65	0.8563	9	9	
2	0.5180	15	0.6056	24	1.6512	65	0.8554	9	8	
3	0.5195	15	0.6080	24	1.6447	64	0.8545	9	7	25
4	0.5210	15	0.6104	24	1.6383	64	0.8536	10	6	1 2.5 2 5.0
5	0.5225	15	0.6128	24	1.6319	64	0.8526	10	5	3 7.5 4 10.0
6	0.5240	15	0.6152	24	1.6255	64	0.8517	9	4	5 12.5 6 15.0
7	0.5255	15	0.6176	24	1.6191	63	0.8508	9	3	7 17.5 8 20.0
8	0.5270	14	0.6200	24	1.6128	62	0.8499	9	2	9 22.5
9	0.5284	15	0.6224	25	1.6066	63	0.8490	10	1	
32.0	0.5299	15	0.6249	24	1.6003	62	0.8480	9	58.0	
1	0.5314	15	0.6273	24	1.5941	61	0.8471	9	9	
2	0.5329	15	0.6297	25	1.5880	62	0.8462	9	8	
3	0.5344	14	0.6322	24	1.5818	61	0.8453	10	7	26
4	0.5358	15	0.6346	25	1.5757	60	0.8443	9	6	1 2.6 2 5.2
5	0.5373	15	0.6371	24	1.5697	60	0.8434	9	5	3 7.8 4 10.4
6	0.5388	14	0.6395	25	1.5637	60	0.8425	10	4	5 13.0 6 15.6
7	0.5402	15	0.6420	25	1.5577	60	0.8415	9	3	7 18.2 8 20.8
8	0.5417	15	0.6445	24	1.5517	59	0.8406	10	2	9 23.4
9	0.5432	14	0.6469	25	1.5458	59	0.8396	9	1	
33.0	0.5446	15	0.6494	25	1.5399	59	0.8387	10	57.0	
1	0.5461	15	0.6519	25	1.5340	58	0.8377	9	9	
2	0.5476	14	0.6544	25	1.5282	58	0.8368	10	8	15
3	0.5490	15	0.6569	25	1.5224	58	0.8358	10	7	1 1.5 2 3.0
4	0.5505	14	0.6594	25	1.5166	58	0.8348	9	6	3 4.5 4 6.0
5	0.5519	15	0.6619	25	1.5108	57	0.8339	10	5	5 7.5 6 9.0
6	0.5534	14	0.6644	25	1.5051	57	0.8329	9	4	7 10.5 8 12.0
7	0.5548	15	0.6669	25	1.4994	56	0.8320	10	3	9 13.5
8	0.5563	14	0.6694	26	1.4938	56	0.8310	10	2	
9	0.5577	15	0.6720	25	1.4882	56	0.8300	10	1	
34.0	0.5592	14	0.6745	26	1.4826	56	0.8290	9	56.0	
1	0.5606	15	0.6771	25	1.4770	55	0.8281	10	9	
2	0.5621	14	0.6796	26	1.4715	56	0.8271	10	8	14
3	0.5635	15	0.6822	25	1.4659	54	0.8261	10	7	1 1.4 2 2.8
4	0.5650	14	0.6847	26	1.4605	55	0.8251	10	6	3 4.2 4 5.6
5	0.5664	14	0.6873	26	1.4550	54	0.8241	10	5	5 7.0 6 8.4
6	0.5678	15	0.6899	25	1.4496	54	0.8231	10	4	7 9.8 8 11.2
7	0.5693	14	0.6924	26	1.4442	54	0.8221	10	3	9 12.6
8	0.5707	14	0.6950	26	1.4388	53	0.8211	9	2	
9	0.5721	15	0.6976	26	1.4335	54	0.8202	10	1	
35.0	0.5736		0.7002		1.4281		0.8192		55.0	
	Cosin.	d.	Cotang.	d.	Tang.	d.	Sinus.	d.	Grade	

Grade	Sinus.	d.	Tang.	d.	Cotang.	d.	Cosin.	d.		P. P.
35.0	0.5736		0.7002		1.4281		0.8192		55.0	
		14		26		52		11		
1	0.5750		0.7028		1.4229		0.8181		9	
		14		26		53		10		
2	0.5764		0.7054		1.4176		0.8171		8	
		15		26		52		10		
3	0.5779		0.7080		1.4124		0.8161		7	
		14		27		53		10		27
4	0.5793		0.7107		1.4071		0.8151		6	1 2.7
		14		26		52		10		2 5.4
5	0.5807		0.7133		1.4019		0.8141		5	3 8.1
		14		26		51		10		4 10.8
6	0.5821		0.7159		1.3968		0.8131		4	5 13.5
		14		27		52		10		6 16.2
7	0.5835		0.7186		1.3916		0.8121		3	7 18.9
		15		26		51		10		8 21.6
8	0.5850		0.7212		1.3865		0.8111		2	9 24.3
		14		27		51		11		
9	0.5864		0.7239		1.3814		0.8100		1	
		14		26		50		10		
36.0	0.5878		0.7265		1.3764		0.8090		54.0	
		14		27		51		10		
1	0.5892		0.7292		1.3713		0.8080		9	
		14		27		50		10		
2	0.5906		0.7319		1.3663		0.8070		8	
		14		27		50		11		
3	0.5920		0.7346		1.3613		0.8059		7	
		14		27		49		10		28
4	0.5934		0.7373		1.3564		0.8049		6	1 2.8
		14		27		50		10		2 5.6
5	0.5948		0.7400		1.3514		0.8039		5	3 8.4
		14		27		49		11		4 11.2
6	0.5962		0.7427		1.3465		0.8028		4	5 14.0
		14		27		49		10		6 16.8
7	0.5976		0.7454		1.3416		0.8018		3	7 19.6
		14		27		49		11		8 22.4
8	0.5990		0.7481		1.3367		0.8007		2	9 25.2
		14		27		48		10		
9	0.6004		0.7508		1.3319		0.7997		1	
		14		28		49		11		
37.0	0.6018		0.7536		1.3270		0.7986		53.0	
		14		27		48		10		
1	0.6032		0.7563		1.3222		0.7976		9	
		14		27		47		11		
2	0.6046		0.7590		1.3175		0.7965		8	
		14		28		48		10		29
3	0.6060		0.7618		1.3127		0.7955		7	1 2.9
		14		28		48		11		2 5.8
4	0.6074		0.7646		1.3079		0.7944		6	3 8.7
		14		27		47		10		4 11.6
5	0.6088		0.7673		1.3032		0.7934		5	5 14.5
		13		28		47		11		6 17.4
6	0.6101		0.7701		1.2985		0.7923		4	7 20.3
		14		28		47		11		8 23.2
7	0.6115		0.7729		1.2938		0.7912		3	9 26.1
		14		28		46		10		
8	0.6129		0.7757		1.2892		0.7902		2	
		14		28		46		11		
9	0.6143		0.7785		1.2846		0.7891		1	
		14		28		47		11		
38.0	0.6157		0.7813		1.2799		0.7880		52.0	
		13		28		46		11		
1	0.6170		0.7841		1.2753		0.7869		9	
		14		28		45		10		
2	0.6184		0.7869		1.2708		0.7859		8	
		14		29		46		11		14
3	0.6198		0.7898		1.2662		0.7848		7	1 1.4
		13		28		45		11		2 2.8
4	0.6211		0.7926		1.2617		0.7837		6	3 4.2
		14		28		45		11		4 5.6
5	0.6225		0.7954		1.2572		0.7826		5	5 7.0
		14		29		45		11		6 8.4
6	0.6239		0.7983		1.2527		0.7815		4	7 9.8
		13		29		45		11		8 11.2
7	0.6252		0.8012		1.2482		0.7804		3	9 12.6
		14		28		45		11		
8	0.6266		0.8040		1.2437		0.7793		2	
		14		29		44		11		
9	0.6280		0.8069		1.2393		0.7782		1	
		13		29		44		11		
39.0	0.6293		0.8098		1.2349		0.7771		51.0	
		14		29		44		11		
1	0.6307		0.8127		1.2305		0.7760		9	
		13		29		44		11		13
2	0.6320		0.8156		1.2261		0.7749		8	1 1.3
		14		29		43		11		2 2.6
3	0.6334		0.8185		1.2218		0.7738		7	3 3.9
		13		29		44		11		4 5.2
4	0.6347		0.8214		1.2174		0.7727		6	5 6.5
		14		29		43		11		6 7.8
5	0.6361		0.8243		1.2131		0.7716		5	7 9.1
		13		30		43		11		8 10.4
6	0.6374		0.8273		1.2088		0.7705		4	9 11.7
		14		29		43		11		
7	0.6388		0.8302		1.2045		0.7694		3	
		13		30		43		11		
8	0.6401		0.8332		1.2002		0.7683		2	
		13		29		42		11		
9	0.6414		0.8361		1.1960		0.7672		1	
		14		30		42		12		
40.0	0.6428		0.8391		1.1918		0.7660		50.0	
	Cosin.	d.	Cotang.	d.	Tang.	d.	Sinus.	d.	Grade	

Grade	Sinus.	d.	Tang.	d.	Cotang.	d.	Cosinus	d.		P. P.
40.0	0.6428		0.8391		1.1918		0.7660		50.0	
1	0.6441	13	0.8421	30	1.1875	43	0.7649	11	9	
2	0.6455	14	0.8451	30	1.1833	42	0.7638	11	8	
3	0.6468	13	0.8481	30	1.1792	41	0.7627	11	7	31
		13		30		42		12		1 3.1
4	0.6481		0.8511		1.1750		0.7615		6	2 6.2
5	0.6494	13	0.8541	30	1.1708	42	0.7604	11	5	3 9.3
6	0.6508	14	0.8571	30	1.1667	41	0.7593	11	4	4 12.4
		13		30		41		12		5 15.5
7	0.6521		0.8601		1.1626		0.7581		3	6 18.6
8	0.6534	13	0.8632	31	1.1585	41	0.7570	11	2	7 21.7
9	0.6547	13	0 8662	30	1.1544	41	0.7559	11	1	8 24.8
41.0	0.6561	14	0.8693	31	1.1504	40	0.7547	12	49.0	9 27.9
1	0.6574	13	0.8724	31	1.1463	41	0.7536	11	9	
2	0.6587	13	0.8754	30	1.1423	40	0.7524	12	8	
3	0.6600	13	0.8785	31	1.1383	40	0.7513	11	7	32
		13		31		40		12		1 3.2
4	0.6613		0.8816		1.1343		0.7501		6	2 6.4
5	0.6626	13	0.8847	31	1.1303	40	0.7490	11	5	3 9.6
6	0.6639	13	0.8878	31	1.1263	40	0.7478	12	4	4 12.8
		13		32		39		12		5 16.0
7	0.6652		0.8910		1.1224		0.7466		3	6 19.2
8	0 6665	13	0.8941	31	1.1184	40	0.7455	11	2	7 22.4
9	0.6678	13	0.8972	31	1.1145	39	0.7443	12	1	8 25.6
42.0	0.6691	13	0.9004	32	1.1106	39	0.7431	12	48.0	9 28.8
1	0.6704	13	0.9036	32	1.1067	39	0.7420	11	9	
2	0.6717	13	0.9067	31	1.1028	39	0.7408	12	8	
3	0.6730	13	0.9099	32	1.0990	38	0.7396	12	7	33
		13		32		39		11		1 3.3
4	0.6743		0.9131		1.0951		0.7385		6	2 6.6
5	0.6756	13	0.9163	32	1.0913	38	0.7373	12	5	3 9.9
6	0.6769	13	0.9195	32	1.0875	38	0.7361	12	4	4 13.2
		13		33		38		12		5 16.5
7	0.6782		0.9228		1.0837		0.7349		3	6 19.8
8	0.6794	12	0.9260	32	1.0799	38	0.7337	12	2	7 23.1
9	0.6807	13	0.9293	33	1.0761	38	0.7325	12	1	8 26.4
43.0	0.6820	13	0.9325	32	1.0724	37	0.7314	11	47.0	9 29.7
1	0.6833	13	0.9358	33	1.0686	38	0.7302	12	9	
2	0.6845	12	0.9391	33	1.0649	37	0.7290	12	8	
3	0.6858	13	0.9424	33	1.0612	37	0.7278	12	7	34
		13		33		37		12		1 3.4
4	0.6871		0.9457		1.0575		0.7266		6	2 6.8
5	0.6884	13	0.9490	33	1.0538	37	0.7254	12	5	3 10.2
6	0.6896	12	0.9523	33	1.0501	37	0.7242	12	4	4 13.6
		13		33		37		12		5 17.0
7	0.6909		0.9556		1.0464		0.7230		3	6 20.4
8	0.6921	12	0.9590	34	1.0428	36	0.7218	12	2	7 23.8
9	0.6934	13	0.9623	33	1.0392	36	0.7206	12	1	8 27.2
44.0	0.6947	13	0.9657	34	1.0355	37	0.7193	13	46.0	9 30.6
1	0.6959	12	0.9691	34	1.0319	36	0.7181	12	9	
2	0.6972	13	0.9725	34	1.0283	36	0.7169	12	8	
3	0.6984	12	0.9759	34	1.0247	36	0.7157	12	7	13
		13		34		35		12		1 1.3
4	0.6997		0.9793		1.0212		0.7145		6	2 2.6
5	0.7009	12	0.9827	34	1.0176	36	0.7133	12	5	3 3.9
6	0.7022	13	0.9861	34	1.0141	35	0.7120	13	4	4 5.2
		12		35		36		12		5 6.5
7	0.7034		0.9896		1.0105		0.7108		3	6 7.8
8	0.7046	12	0.9930	34	1.0070	35	0.7096	12	2	7 9.1
9	0.7059	13	0.9965	35	1.0035	35	0.7083	13	1	8 10.4
45.0	0.7071	12	1.0000	35	1.0000	35	0.7071	12	45.0	9 11.7
	Cosin.	d.	Cotang.	d.	Tang.	d.	Sinus.	d.	Grade	

TAFEL VIII.

DIE

QUADRATE DER ZAHLEN

VON 0,000 BIS 3,500.

N.	N² 0	1	2	3	4	5	6	7	8	9	P. P.
0.00	0. 0000	0000	0000	0000	0000	0000	0000	0000	0001	0001	
01	0001	0001	0001	0002	0002	0002	0003	0003	0003	0004	
02	0004	0004	0005	0005	0006	0006	0007	0007	0008	0008	
03	0009	0010	0010	0011	0012	0012	0013	0014	0014	0015	
04	0016	0017	0018	0018	0019	0020	0021	0022	0023	0024	2 3 1 0.2 0.3
05	0. 0025	0026	0027	0028	0029	0030	0031	0032	0034	0035	2 0.4 0.6
06	0036	0037	0038	0040	0041	0042	0044	0045	0046	0048	3 0.6 0.9
07	0049	0050	0052	0053	0055	0056	0058	0059	0061	0062	4 0.8 1.2 5 1.0 1.5
08	0064	0066	0067	0069	0071	0072	0074	0076	0077	0079	6 1.2 1.8
09	0081	0083	0085	0086	0088	0090	0092	0094	0096	0098	7 1.4 2.1 8 1.6 2.4
0.10	0. 0100	0102	0104	0106	0108	0110	0112	0114	0117	0119	9 1.8 2.7
11	0121	0123	0125	0128	0130	0132	0135	0137	0139	0142	
12	0144	0146	0149	0151	0154	0156	0159	0161	0164	0166	
13	0169	0172	0174	0177	0180	0182	0185	0188	0190	0193	
14	0196	0199	0202	0204	0207	0210	0213	0216	0219	0222	4 5 1 0.4 0.5
15	0. 0225	0228	0231	0234	0237	0240	0243	0246	0250	0253	2 0.8 1.0
16	0256	0259	0262	0266	0269	0272	0276	0279	0282	0286	3 1.2 1.5 4 1.6 2.0
17	0289	0292	0296	0299	0303	0306	0310	0313	0317	0320	5 2.0 2.5
18	0324	0328	0331	0335	0339	0342	0346	0350	0353	0357	6 2.4 3.0 7 2.8 3.5
19	0361	0365	0369	0372	0376	0380	0384	0388	0392	0396	8 3.2 4.0
0.20	0. 0400	0404	0408	0412	0416	0420	0424	0428	0433	0437	9 3.6 4.5
21	0441	0445	0449	0454	0458	0462	0467	0471	0475	0480	
22	0484	0488	0493	0497	0502	0506	0511	0515	0520	0524	
23	0529	0534	0538	0543	0548	0552	0557	0562	0566	0571	6 7 1 0.6 0.7
24	0576	0581	0586	0590	0595	0600	0605	0610	0615	0620	2 1.2 1.4
25	0. 0625	0630	0635	0640	0645	0650	0655	0660	0666	0671	3 1.8 2.1 4 2.4 2.8
26	0676	0681	0686	0692	0697	0702	0708	0713	0718	0724	5 3.0 3.5
27	0729	0734	0740	0745	0751	0756	0762	0767	0773	0778	6 3.6 4.2 7 4.2 4.9
28	0784	0790	0795	0801	0807	0812	0818	0824	0829	0835	8 4.8 5.6
29	0841	0847	0853	0858	0864	0870	0876	0882	0888	0894	9 5.4 6.3
0.30	0. 0900	0906	0912	0918	0924	0930	0936	0942	0949	0955	
31	0961	0967	0973	0980	0986	0992	0999	1005	1011	1018	
32	1024	1030	1037	1043	1050	1056	1063	1069	1076	1082	8 9 1 0.8 0.9
33	1089	1096	1102	1109	1116	1122	1129	1136	1142	1149	2 1.6 1.8
34	1156	1163	1170	1176	1183	1190	1197	1204	1211	1218	3 2.4 2.7 4 3.2 3.6
35	0. 1225	1232	1239	1246	1253	1260	1267	1274	1282	1289	5 4.0 4.5
36	1296	1303	1310	1318	1325	1332	1340	1347	1354	1362	6 4.8 5.4 7 5.6 6.3
37	1369	1376	1384	1391	1399	1406	1414	1421	1429	1436	8 6.4 7.2
38	1444	1452	1459	1467	1475	1482	1490	1498	1505	1513	9 7.2 8.1
39	1521	1529	1537	1544	1552	1560	1568	1576	1584	1592	
0.40	0. 1600	1608	1616	1624	1632	1640	1648	1656	1665	1673	
41	1681	1689	1697	1706	1714	1722	1731	1739	1747	1756	10 11
42	1764	1772	1781	1789	1798	1806	1815	1823	1832	1840	1 1.0 1.1
43	1849	1858	1866	1875	1884	1892	1901	1910	1918	1927	2 2.0 2.2 3 3.0 3.3
44	1936	1945	1954	1962	1971	1980	1989	1998	2007	2016	4 4.0 4.4
45	0. 2025	2034	2043	2052	2061	2070	2079	2088	2098	2107	5 5.0 5.5 6 6.0 6.6
46	2116	2125	2134	2144	2153	2162	2172	2181	2190	2200	7 7.0 7.7
47	2209	2218	2228	2237	2247	2256	2266	2275	2285	2294	8 8.0 8.8 9 9.0 9.9
48	2304	2314	2323	2333	2343	2352	2362	2372	2381	2391	
49	2401	2411	2421	2430	2440	2450	2460	2470	2480	2490	
0.50	0. 2500	2510	2520	2530	2540	2550	2560	2570	2581	2591	
N.	N² 0	1	2	3	4	5	6	7	8	9	

N.	N² 0	1	2	3	4	5	6	7	8	9	P. P.
0.50	0. 2500	2510	2520	2530	2540	2550	2560	2570	2581	2591	
51	2601	2611	2621	2632	2642	2652	2663	2673	2683	2694	
52	2704	2714	2725	2735	2746	2756	2767	2777	2788	2798	
53	2809	2820	2830	2841	2852	2862	2873	2884	2894	2905	10 11
54	2916	2927	2938	2948	2959	2970	2981	2992	3003	3014	1 1.0 1.1 2 2.0 2.2 3 3.0 3.3
55	0. 3025	3036	3047	3058	3069	3080	3091	3102	3114	3125	4 4.0 4.4 5 5.0 5.5
56	3136	3147	3158	3170	3181	3192	3204	3215	3226	3238	6 6.0 6.6 7 7.0 7.7
57	3249	3260	3272	3283	3295	3306	3318	3329	3341	3352	8 8.0 8.8 9 9.0 9.9
58	3364	3376	3387	3399	3411	3422	3434	3446	3457	3469	
59	3481	3493	3505	3516	3528	3540	3552	3564	3576	3588	
0.60	0. 3600	3612	3624	3636	3648	3660	3672	3684	3697	3709	
61	3721	3733	3745	3758	3770	3782	3795	3807	3819	3832	12 13 1 1.2 1.3
62	3844	3856	3869	3881	3894	3906	3919	3931	3944	3956	2 2.4 2.6 3 3.6 3.9
63	3969	3982	3994	4007	4020	4032	4045	4058	4070	4083	4 4.8 5.2 5 6.0 6.5
64	4096	4109	4122	4134	4147	4160	4173	4186	4199	4212	6 7.2 7.8 7 8.4 9.1
65	0. 4225	4238	4251	4264	4277	4290	4303	4316	4330	4343	8 9.6 10.4 9 10.8 11.7
66	4356	4369	4382	4396	4409	4422	4436	4449	4462	4476	
67	4489	4502	4516	4529	4543	4556	4570	4583	4597	4610	
68	4624	4638	4651	4665	4679	4692	4706	4720	4733	4747	
69	4761	4775	4789	4802	4816	4830	4844	4858	4872	4886	14 15 1 1.4 1.5
0.70	0. 4900	4914	4928	4942	4956	4970	4984	4998	5013	5027	2 2.8 3.0 3 4.2 4.5
71	5041	5055	5069	5084	5098	5112	5127	5141	5155	5170	4 5.6 6.0 5 7.0 7.5
72	5184	5198	5213	5227	5242	5256	5271	5285	5300	5314	6 8.4 9.0 7 9.8 10.5
73	5329	5344	5358	5373	5388	5402	5417	5432	5446	5461	8 11.2 12.0 9 12.6 13.5
74	5476	5491	5506	5520	5535	5550	5565	5580	5595	5610	
75	0. 5625	5640	5655	5670	5685	5700	5715	5730	5746	5761	
76	5776	5791	5806	5822	5837	5852	5868	5883	5898	5914	
77	5929	5944	5960	5975	5991	6006	6022	6037	6053	6068	16 17 1 1.6 1.7
78	6084	6100	6115	6131	6147	6162	6178	6194	6209	6225	2 3.2 3.4 3 4.8 5.1
79	6241	6257	6273	6288	6304	6320	6336	6352	6368	6384	4 6.4 6.8 5 8.0 8.5
0.80	0. 6400	6416	6432	6448	6464	6480	6496	6512	6529	6545	6 9.6 10.2 7 11.2 11.9
81	6561	6577	6593	6610	6626	6642	6659	6675	6691	6708	8 12.8 13.6 9 14.4 15.3
82	6724	6740	6757	6773	6790	6806	6823	6839	6856	6872	
83	6889	6906	6922	6939	6956	6972	6989	7006	7022	7039	
84	7056	7073	7090	7106	7123	7140	7157	7174	7191	7208	18 19
85	0. 7225	7242	7259	7276	7293	7310	7327	7344	7362	7379	1 1.8 1.9
86	7396	7413	7430	7448	7465	7482	7500	7517	7534	7552	2 3.6 3.8 3 5.4 5.7
87	7569	7586	7604	7621	7639	7656	7674	7691	7709	7726	4 7.2 7.6 5 9.0 9.5
88	7744	7762	7779	7797	7815	7832	7850	7868	7885	7903	6 10.8 11.4
89	7921	7939	7957	7974	7992	8010	8028	8046	8064	8082	7 12.6 13.3 8 14.4 15.2
0.90	0. 8100	8118	8136	8154	8172	8190	8208	8226	8245	8263	9 16.2 17.1
91	8281	8299	8317	8336	8354	8372	8391	8409	8427	8446	
92	8464	8482	8501	8519	8538	8556	8575	8593	8612	8630	
93	8649	8668	8686	8705	8724	8742	8761	8780	8798	8817	20 21 1 2.0 2.1
94	8836	8855	8874	8892	8911	8930	8949	8968	8987	9006	2 4.0 4.2 3 6.0 6.3
95	0. 9025	9044	9063	9082	9101	9120	9139	9158	9178	9197	4 8.0 8.4 5 10.0 10.5
96	9216	9235	9254	9274	9293	9312	9332	9351	9370	9390	6 12.0 12.6 7 14.0 14.7
97	9409	9428	9448	9467	9487	9506	9526	9545	9565	9584	8 16.0 16.8 9 18.0 18.9
98	9604	9624	9643	9663	9683	9702	9722	9742	9761	9781	
99	0. 9801	9821	9841	9860	9880	9900	9920	9940	9960	9980	
1.00	1. 0000	0020	0040	0060	0080	0100	0120	0140	0161	0181	
N.	N² 0	1	2	3	4	5	6	7	8	9	

N.	N² 0	1	2	3	4	5	6	7	8	9	P. P.
1.00	1. 0000	0020	0040	0060	0080	0100	0120	0140	0161	0181	
01	0201	0221	0241	0262	0282	0302	0323	0343	0363	0384	
02	0404	0424	0445	0465	0486	0506	0527	0547	0568	0588	
03	0609	0630	0650	0671	0692	0712	0733	0754	0774	0795	20 21
04	0816	0837	0858	0878	0899	0920	0941	0962	0983	1004	1 2.0 2.1
05	1. 1025	1046	1067	1088	1109	1130	1151	1172	1194	1215	2 4.0 4.2
06	1236	1257	1278	1300	1321	1342	1364	1385	1406	1428	3 6.0 6.3
07	1449	1470	1492	1513	1535	1556	1578	1599	1621	1642	4 8.0 8.4
08	1664	1686	1707	1729	1751	1772	1794	1816	1837	1859	5 10.0 10.5
09	1881	1903	1925	1946	1968	1990	2012	2034	2056	2078	6 12.0 12.6
1.10	1. 2100	2122	2144	2166	2188	2210	2232	2254	2277	2299	7 14.0 14.7
11	2321	2343	2365	2388	2410	2432	2455	2477	2499	2522	8 16.0 16.8
12	2544	2566	2589	2611	2634	2656	2679	2701	2724	2746	9 18.0 18.9
13	2769	2792	2814	2837	2860	2882	2905	2928	2950	2973	
14	2996	3019	3042	3064	3087	3110	3133	3156	3179	3202	22 23
15	1. 3225	3248	3271	3294	3317	3340	3363	3386	3410	3433	1 2.2 2.3
16	3456	3479	3502	3526	3549	3572	3596	3619	3642	3666	2 4.4 4.6
17	3689	3712	3736	3759	3783	3806	3830	3853	3877	3900	3 6.6 6.9
18	3924	3948	3971	3995	4019	4042	4066	4090	4113	4137	4 8.8 9.2
19	4161	4185	4209	4232	4256	4280	4304	4328	4352	4376	5 11.0 11.5
1.20	1. 4400	4424	4448	4472	4496	4520	4544	4568	4593	4617	6 13.2 13.8
21	4641	4665	4689	4714	4738	4762	4787	4811	4835	4860	7 15.4 16.1
22	4884	4908	4933	4957	4982	5006	5031	5055	5080	5104	8 17.6 18.4
23	5129	5154	5178	5203	5228	5252	5277	5302	5326	5351	9 19.8 20.7
24	5376	5401	5426	5450	5475	5500	5525	5550	5575	5600	
25	1. 5625	5650	5675	5700	5725	5750	5775	5800	5826	5851	24 25
26	5876	5901	5926	5952	5977	6002	6028	6053	6078	6104	1 2.4 2.5
27	6129	6154	6180	6205	6231	6256	6282	6307	6333	6358	2 4.8 5.0
28	6384	6410	6435	6461	6487	6512	6538	6564	6589	6615	3 7.2 7.5
29	6641	6667	6693	6718	6744	6770	6796	6822	6848	6874	4 9.6 10.0
1.30	1. 6900	6926	6952	6978	7004	7030	7056	7082	7109	7135	5 12.0 12.5
31	7161	7187	7213	7240	7266	7292	7319	7345	7371	7398	6 14.4 15.0
32	7424	7450	7477	7503	7530	7556	7583	7609	7636	7662	7 16.8 17.5
33	7689	7716	7742	7769	7796	7822	7849	7876	7902	7929	8 19.2 20.0
34	7956	7983	8010	8036	8063	8090	8117	8144	8171	8198	9 21.6 22.5
35	1. 8225	8252	8279	8306	8333	8360	8387	8414	8442	8469	
36	8496	8523	8550	8578	8605	8632	8660	8687	8714	8742	26 27
37	8769	8796	8824	8851	8879	8906	8934	8961	8989	9016	1 2.6 2.7
38	9044	9072	9099	9127	9155	9182	9210	9238	9265	9293	2 5.2 5.4
39	9321	9349	9377	9404	9432	9460	9488	9516	9544	9572	3 7.8 8.1
1.40	1. 9600	9628	9656	9684	9712	9740	9768	9796	9825	9853	4 10.4 10.8
41	1. 9881	9909	9937	9966	9994	$\bar{0}022$	$\bar{0}051$	$\bar{0}079$	$\bar{0}107$	$\bar{0}136$	5 13.0 13.5
42	2. 0164	0192	0221	0249	0278	0306	0335	0363	0392	0420	6 15.6 16.2
43	0449	0478	0506	0535	0564	0592	0621	0650	0678	0707	7 18.2 18.9
44	0736	0765	0794	0822	0851	0880	0909	0938	0967	0996	8 20.8 21.6
45	2. 1025	1054	1083	1112	1141	1170	1199	1228	1258	1287	9 23.4 24.3
46	1316	1345	1374	1404	1433	1462	1492	1521	1550	1580	
47	1609	1638	1668	1697	1727	1756	1786	1815	1845	1874	28 29
48	1904	1934	1963	1993	2023	2052	2082	2112	2141	2171	1 2.8 2.9
49	2201	2231	2261	2290	2320	2350	2380	2410	2440	2470	2 5.6 5.8
1.50	2. 2500	2530	2560	2590	2620	2650	2680	2710	2741	2771	3 8.4 8.7
											4 11.2 11.6
											5 14.0 14.5
											6 16.8 17.4
											7 19.6 20.3
											8 22.4 23.2
											9 25.2 26.1
											30 31
											1 3.0 3.1
											2 6.0 6.2
											3 9.0 9.3
											4 12.0 12.4
											5 15.0 15.5
											6 18.0 18.6
											7 21.0 21.7
											8 24.0 24.8
											9 27.0 27.9
N.	N² 0	1	2	3	4	5	6	7	8	9	

N.	N² 0	1	2	3	4	5	6	7	8	9	P. P.
1.50	2. 2500	2530	2560	2590	2620	2650	2680	2710	2741	2771	
51	2801	2831	2861	2892	2922	2952	2983	3013	3043	3074	
52	3104	3134	3165	3195	3226	3256	3287	3317	3348	3378	
53	3409	3440	3470	3501	3532	3562	3593	3624	3654	3685	30 31
54	3716	3747	3778	3808	3839	3870	3901	3932	3963	3994	1 3.0 3.1
55	2. 4025	4056	4087	4118	4149	4180	4211	4242	4274	4305	2 6.0 6.2
56	4336	4367	4398	4430	4461	4492	4524	4555	4586	4618	3 9.0 9.3
57	4649	4680	4712	4743	4775	4806	4838	4869	4901	4932	4 12.0 12.4
58	4964	4996	5027	5059	5091	5122	5154	5186	5217	5249	5 15.0 15.5
59	5281	5313	5345	5376	5408	5440	5472	5504	5536	5568	6 18.0 18.6
1.60	2. 5600	5632	5664	5696	5728	5760	5792	5824	5857	5889	7 21.0 21.7
61	5921	5953	5985	6018	6050	6082	6115	6147	6179	6212	8 24.0 24.8
62	6244	6276	6309	6341	6374	6406	6439	6471	6504	6536	9 27.0 27.9
63	6569	6602	6634	6667	6700	6732	6765	6798	6830	6863	
64	6896	6929	6962	6994	7027	7060	7093	7126	7159	7192	32 33
65	2. 7225	7258	7291	7324	7357	7390	7423	7456	7490	7523	1 3.2 3.3
66	7556	7589	7622	7656	7689	7722	7756	7789	7822	7856	2 6.4 6.6
67	7889	7922	7956	7989	8023	8056	8090	8123	8157	8190	3 9.6 9.9
68	8224	8258	8291	8325	8359	8392	8426	8460	8493	8527	4 12.8 13.2
69	8561	8595	8629	8662	8696	8730	8764	8798	8832	8866	5 16.0 16.5
1.70	2. 8900	8934	8968	9002	9036	9070	9104	9138	9173	9207	6 19.2 19.8
71	9241	9275	9309	9344	9378	9412	9447	9481	9515	9550	7 22.4 23.1
72	9584	9618	9653	9687	9722	9756	9791	9825	9860	9894	8 25.6 26.4
73	2. 9929	9964	9998	0033	0068	0102	0137	0172	0206	0241	9 28.8 29.7
74	3. 0276	0311	0346	0380	0415	0450	0485	0520	0555	0590	
75	3. 0625	0660	0695	0730	0765	0800	0835	0870	0906	0941	34 35
76	0976	1011	1046	1082	1117	1152	1188	1223	1258	1294	1 3.4 3.5
77	1329	1364	1400	1435	1471	1506	1542	1577	1613	1648	2 6.8 7.0
78	1684	1720	1755	1791	1827	1862	1898	1934	1969	2005	3 10.2 10.5
79	2041	2077	2113	2148	2184	2220	2256	2292	2328	2364	4 13.6 14.0
1.80	3. 2400	2436	2472	2508	2544	2580	2616	2652	2689	2725	5 17.0 17.5
81	2761	2797	2833	2870	2906	2942	2979	3015	3051	3088	6 20.4 21.0
82	3124	3160	3197	3233	3270	3306	3343	3379	3416	3452	7 23.8 24.5
83	3489	3526	3562	3599	3636	3672	3709	3746	3782	3819	8 27.2 28.0
84	3856	3893	3930	3966	4003	4040	4077	4114	4151	4188	9 30.6 31.5
85	3. 4225	4262	4299	4336	4373	4410	4447	4484	4522	4559	
86	4596	4633	4670	4708	4745	4782	4820	4857	4894	4932	36 37
87	4969	5006	5044	5081	5119	5156	5194	5231	5269	5306	1 3.6 3.7
88	5344	5382	5419	5457	5495	5532	5570	5608	5645	5683	2 7.2 7.4
89	5721	5759	5797	5834	5872	5910	5948	5986	6024	6062	3 10.8 11.1
1.90	3. 6100	6138	6176	6214	6252	6290	6328	6366	6405	6443	4 14.4 14.8
91	6481	6519	6557	6596	6634	6672	6711	6749	6787	6826	5 18.0 18.5
92	6864	6902	6941	6979	7018	7056	7095	7133	7172	7210	6 21.6 22.2
93	7249	7288	7326	7365	7404	7442	7481	7520	7558	7597	7 25.2 25.9
94	7636	7675	7714	7752	7791	7830	7869	7908	7947	7986	8 28.8 29.6
95	3. 8025	8064	8103	8142	8181	8220	8259	8298	8338	8377	9 32.4 33.3
96	8416	8455	8494	8534	8573	8612	8652	8691	8730	8770	
97	8809	8848	8888	8927	8967	9006	9046	9085	9125	9164	38 39
98	9204	9244	9283	9323	9363	9402	9442	9482	9521	9561	1 3.8 3.9
99	9601	9641	9681	9720	9760	9800	9840	9880	9920	9960	2 7.6 7.8
2.00	4. 0000	0040	0080	0120	0160	0200	0240	0280	0321	0361	3 11.4 11.7
											4 15.2 15.6
											5 19.0 19.5
											6 22.8 23.4
											7 26.6 27.3
											8 30.4 31.2
											9 34.2 35.1
											40 41
											1 4.0 4.1
											2 8.0 8.2
											3 12.0 12.3
											4 16.0 16.4
											5 20.0 20.5
											6 24.0 24.6
											7 28.0 28.7
											8 32.0 32.8
											9 36.0 36.9
N.	N² 0	1	2	3	4	5	6	7	8	9	

N.	N² 0	1	2	3	4	5	6	7	8	9	P. P.
2.00	4. 0000	0040	0080	0120	0160	0200	0240	0280	0321	0361	
01	0401	0441	0481	0522	0562	0602	0643	0683	0723	0764	
02	0804	0844	0885	0925	0966	1006	1047	1087	1128	1168	
03	1209	1250	1290	1331	1372	1412	1453	1494	1534	1575	40 41
04	1616	1657	1698	1738	1779	1820	1861	1902	1943	1984	1 4.0 4.1
05	4. 2025	2066	2107	2148	2189	2230	2271	2312	2354	2395	2 8.0 8.2
06	2436	2477	2518	2560	2601	2642	2684	2725	2766	2808	3 12.0 12.3
07	2849	2890	2932	2973	3015	3056	3098	3139	3181	3222	4 16.0 16.4
08	3264	3306	3347	3389	3431	3472	3514	3556	3597	3639	5 20.0 20.5
09	3681	3723	3765	3806	3848	3890	3932	3974	4016	4058	6 24.0 24.6
2.10	4. 4100	4142	4184	4226	4268	4310	4352	4394	4437	4479	7 28.0 28.7
11	4521	4563	4605	4648	4690	4732	4775	4817	4859	4902	8 32.0 32.8
12	4944	4986	5029	5071	5114	5156	5199	5241	5284	5326	9 36.0 36.9
13	5369	5412	5454	5497	5540	5582	5625	5668	5710	5753	
14	5796	5839	5882	5924	5967	6010	6053	6096	6139	6182	42 43
15	4. 6225	6268	6311	6354	6397	6440	6483	6526	6570	6613	1 4.2 4.3
16	6656	6699	6742	6786	6829	6872	6916	6959	7002	7046	2 8.4 8.6
17	7089	7132	7176	7219	7263	7306	7350	7393	7437	7480	3 12.6 12.9
18	7524	7568	7611	7655	7699	7742	7786	7830	7873	7917	4 16.8 17.2
19	7961	8005	8049	8092	8136	8180	8224	8268	8312	8356	5 21.0 21.5
2.20	4. 8400	8444	8488	8532	8576	8620	8664	8708	8753	8797	6 25.2 25.8
21	8841	8885	8929	8974	9018	9062	9107	9151	9195	9240	7 29.4 30.1
22	9284	9328	9373	9417	9462	9506	9551	9595	9640	9684	8 33.6 34.4
23	4. 9729	9774	9818	9863	9908	9952	9997	0042	0086	0131	9 37.8 38.7
24	5. 0176	0221	0266	0310	0355	0400	0445	0490	0535	0580	
25	5. 0625	0670	0715	0760	0805	0850	0895	0940	0986	1031	44 45
26	1076	1121	1166	1212	1257	1302	1348	1393	1438	1484	1 4.4 4.5
27	1529	1574	1620	1665	1711	1756	1802	1847	1893	1938	2 8.8 9.0
28	1984	2030	2075	2121	2167	2212	2258	2304	2349	2395	3 13.2 13.5
29	2441	2487	2533	2578	2624	2670	2716	2762	2808	2854	4 17.6 18.0
2.30	5. 2900	2946	2992	3038	3084	3130	3176	3222	3269	3315	5 22.0 22.5
31	3361	3407	3453	3500	3546	3592	3639	3685	3731	3778	6 26.4 27.0
32	3824	3870	3917	3963	4010	4056	4103	4149	4196	4242	7 30.8 31.5
33	4289	4336	4382	4429	4476	4522	4569	4616	4662	4709	8 35.2 36.0
34	4756	4803	4850	4896	4943	4990	5037	5084	5131	5178	9 39.6 40.5
35	5. 5225	5272	5319	5366	5413	5460	5507	5554	5602	5649	
36	5696	5743	5790	5838	5885	5932	5980	6027	6074	6122	46 47
37	6169	6216	6264	6311	6359	6406	6454	6501	6549	6596	1 4.6 4.7
38	6644	6692	6739	6787	6835	6882	6930	6978	7025	7073	2 9.2 9.4
39	7121	7169	7217	7264	7312	7360	7408	7456	7504	7552	3 13.8 14.1
2.40	5. 7600	7648	7696	7744	7792	7840	7888	7936	7985	8033	4 18.4 18.8
41	8081	8129	8177	8226	8274	8322	8371	8419	8467	8516	5 23.0 23.5
42	8564	8612	8661	8709	8758	8806	8855	8903	8952	9000	6 27.6 28.2
43	9049	9098	9146	9195	9244	9292	9341	9390	9438	9487	7 32.2 32.9
44	5. 9536	9585	9634	9682	9731	9780	9829	9878	9927	9976	8 36.8 37.6
45	6. 0025	0074	0123	0172	0221	0270	0319	0368	0418	0467	9 41.4 42.3
46	0516	0565	0614	0664	0713	0762	0812	0861	0910	0960	
47	1009	1058	1108	1157	1207	1256	1306	1355	1405	1454	48 49
48	1504	1554	1603	1653	1703	1752	1802	1852	1901	1951	1 4.8 4.9
49	2001	2051	2101	2150	2200	2250	2300	2350	2400	2450	2 9.6 9.8
2.50	6. 2500	2550	2600	2650	2700	2750	2800	2850	2901	2951	3 14.4 14.7
											4 19.2 19.6
N.	N² 0	1	2	3	4	5	6	7	8	9	5 24.0 24.5
											6 28.8 29.4
											7 33.6 34.3
											8 38.4 39.2
											9 43.2 44.1
											50 51
											1 5.0 5.1
											2 10.0 10.2
											3 15.0 15.3
											4 20.0 20.4
											5 25.0 25.5
											6 30.0 30.6
											7 35.0 35.7
											8 40.0 40.8
											9 45.0 45.9

N.	N² 0	1	2	3	4	5	6	7	8	9	P. P.
2.50	6. 2500	2550	2600	2650	2700	2750	2800	2850	2901	2951	
51	3001	3051	3101	3152	3202	3252	3303	3353	3403	3454	
52	3504	3554	3605	3655	3706	3756	3807	3857	3908	3958	
53	4009	4060	4110	4161	4212	4262	4313	4364	4414	4465	50 51
54	4516	4567	4618	4668	4719	4770	4821	4872	4923	4974	1 5.0 5.1
55	6. 5025	5076	5127	5178	5229	5280	5331	5382	5434	5485	2 10.0 10.2
56	5536	5587	5638	5690	5741	5792	5844	5895	5946	5998	3 15.0 15.3
57	6049	6100	6152	6203	6255	6306	6358	6409	6461	6512	4 20.0 20.4
58	6564	6616	6667	6719	6771	6822	6874	6926	6977	7029	5 25.0 25.5
59	7081	7133	7185	7236	7288	7340	7392	7444	7496	7548	6 30.0 30.6
2.60	6. 7600	7652	7704	7756	7808	7860	7912	7964	8017	8069	7 35.0 35.7
61	8121	8173	8225	8278	8330	8382	8435	8487	8539	8592	8 40.0 40.8
62	8644	8696	8749	8801	8854	8906	8959	9011	9064	9116	9 45.0 45.9
63	9169	9222	9274	9327	9380	9432	9485	9538	9590	9643	
64	6. 9696	9749	9802	9854	9907	9960	$\bar{0}013$	$\bar{0}066$	$\bar{0}119$	$\bar{0}172$	52 53
65	7. 0225	0278	0331	0384	0437	0490	0543	0596	0650	0703	1 5.2 5.3
66	0756	0809	0862	0916	0969	1022	1076	1129	1182	1236	2 10.4 10.6
67	1289	1342	1396	1449	1503	1556	1610	1663	1717	1770	3 15.6 15.9
68	1824	1878	1931	1985	2039	2092	2146	2200	2253	2307	4 20.8 21.2
69	2361	2415	2469	2522	2576	2630	2684	2738	2792	2846	5 26.0 26.5
2.70	7. 2900	2954	3008	3062	3116	3170	3224	3278	3333	3387	6 31.2 31.8
71	3441	3495	3549	3604	3658	3712	3767	3821	3875	3930	7 36.4 37.1
72	3984	4038	4093	4147	4202	4256	4311	4365	4420	4474	8 41.6 42.4
73	4529	4584	4638	4693	4748	4802	4857	4912	4966	5021	9 46.8 47.7
74	5076	5131	5186	5240	5295	5350	5405	5460	5515	5570	54 55
75	7. 5625	5680	5735	5790	5845	5900	5955	6010	6066	6121	1 5.4 5.5
76	6176	6231	6286	6342	6397	6452	6508	6563	6618	6674	2 10.8 11.0
77	6729	6784	6840	6895	6951	7006	7062	7117	7173	7228	3 16.2 16.5
78	7284	7340	7395	7451	7507	7562	7618	7674	7729	7785	4 21.6 22.0
79	7841	7897	7953	8008	8064	8120	8176	8232	8288	8344	5 27.0 27.5
2.80	7. 8400	8456	8512	8568	8624	8680	8736	8792	8849	8905	6 32.4 33.0
81	8961	9017	9073	9130	9186	9242	9299	9355	9411	9468	7 37.8 38.5
82	7. 9524	9580	9637	9693	9750	9806	9863	9919	9976	$\bar{0}032$	8 43.2 44.0
83	8. 0089	0146	0202	0259	0316	0372	0429	0486	0542	0599	9 48.6 49.5
84	0656	0713	0770	0826	0883	0940	0997	1054	1111	1168	56 57
85	8. 1225	1282	1339	1396	1453	1510	1567	1624	1682	1739	1 5.6 5.7
86	1796	1853	1910	1968	2025	2082	2140	2197	2254	2312	2 11.2 11.4
87	2369	2426	2484	2541	2599	2656	2714	2771	2829	2886	3 16.8 17.1
88	2944	3002	3059	3117	3175	3232	3290	3348	3405	3463	4 22.4 22.8
89	3521	3579	3637	3694	3752	3810	3868	3926	3984	4042	5 28.0 28.5
2.90	8. 4100	4158	4216	4274	4332	4390	4448	4506	4565	4623	6 33.6 34.2
91	4681	4739	4797	4856	4914	4972	5031	5089	5147	5206	7 39.2 39.9
92	5264	5322	5381	5439	5498	5556	5615	5673	5732	5790	8 44.8 45.6
93	5849	5908	5966	6025	6084	6142	6201	6260	6318	6377	9 50.4 51.3
94	6436	6495	6554	6612	6671	6730	6789	6848	6907	6966	58 59
95	8. 7025	7084	7143	7202	7261	7320	7379	7438	7498	7557	1 5.8 5.9
96	7616	7675	7734	7794	7853	7912	7972	8031	8090	8150	2 11.6 11.8
97	8209	8268	8328	8387	8447	8506	8566	8625	8685	8744	3 17.4 17.7
98	8804	8864	8923	8983	9043	9102	9162	9222	9281	9341	4 23.2 23.6
99	8. 9401	9461	9521	9580	9640	9700	9760	9820	9880	9940	5 29.0 29.5
3.00	9. 0000	0060	0120	0180	0240	0300	0360	0420	0481	0541	6 34.8 35.4
											7 40.6 41.3
											8 46.4 47.2
											9 52.2 53.1
											60 61
											1 6.0 6.1
											2 12.0 12.2
											3 18.0 18.3
											4 24.0 24.4
											5 30.0 30.5
											6 36.0 36.6
											7 42.0 42.7
											8 48.0 48.8
											9 54.0 54.9
N.	N² 0	1	2	3	4	5	6	7	8	9	

N.	N² 0	1	2	3	4	5	6	7	8	9
3.00	9. 0000	0060	0120	0180	0240	0300	0360	0420	0481	0541
01	0601	0661	0721	0782	0842	0902	0963	1023	1083	1144
02	1204	1264	1325	1385	1446	1506	1567	1627	1688	1748
03	1809	1870	1930	1991	2052	2112	2173	2234	2294	2355
04	2416	2477	2538	2598	2659	2720	2781	2842	2903	2964
05	9. 3025	3086	3147	3208	3269	3330	3391	3452	3514	3575
06	3636	3697	3758	3820	3881	3942	4004	4065	4126	4188
07	4249	4310	4372	4433	4495	4556	4618	4679	4741	4802
08	4864	4926	4987	5049	5111	5172	5234	5296	5357	5419
09	5481	5543	5605	5666	5728	5790	5852	5914	5976	6038
3.10	9. 6100	6162	6224	6286	6348	6410	6472	6534	6597	6659
11	6721	6783	6845	6908	6970	7032	7095	7157	7219	7282
12	7344	7406	7469	7531	7594	7656	7719	7781	7844	7906
13	7969	8032	8094	8157	8220	8282	8345	8408	8470	8533
14	8596	8659	8722	8784	8847	8910	8973	9036	9099	9162
15	9. 9225	9288	9351	9414	9477	9540	9603	9666	9730	9793
16	9. 9856	9919	9982	0046	0109	0172	0236	0299	0362	0426
17	10. 0489	0552	0616	0679	0743	0806	0870	0933	0997	1060
18	1124	1188	1251	1315	1379	1442	1506	1570	1633	1697
19	1761	1825	1889	1952	2016	2080	2144	2208	2272	2336
3.20	10. 2400	2464	2528	2592	2656	2720	2784	2848	2913	2977
21	3041	3105	3169	3234	3298	3362	3427	3491	3555	3620
22	3684	3748	3813	3877	3942	4006	4071	4135	4200	4264
23	4329	4394	4458	4523	4588	4652	4717	4782	4846	4911
24	4976	5041	5106	5170	5235	5300	5365	5430	5495	5560
25	10. 5625	5690	5755	5820	5885	5950	6015	6080	6146	6211
26	6276	6341	6406	6472	6537	6602	6668	6733	6798	6864
27	6929	6994	7060	7125	7191	7256	7322	7387	7453	7518
28	7584	7650	7715	7781	7847	7912	7978	8044	8109	8175
29	8241	8307	8373	8438	8504	8570	8636	8702	8768	8834
3.30	10. 8900	8966	9032	9098	9164	9230	9296	9362	9429	9495
31	10. 9561	9627	9693	9760	9826	9892	9959	0025	0091	0158
32	11. 0224	0290	0357	0423	0490	0556	0623	0689	0756	0822
33	0889	0956	1022	1089	1156	1222	1289	1356	1422	1489
34	1556	1623	1690	1756	1823	1890	1957	2024	2091	2158
35	11. 2225	2292	2359	2426	2493	2560	2627	2694	2762	2829
36	2896	2963	3030	3098	3165	3232	3300	3367	3434	3502
37	3569	3636	3704	3771	3839	3906	3974	4041	4109	4176
38	4244	4312	4379	4447	4515	4582	4650	4718	4785	4853
39	4921	4989	5057	5124	5192	5260	5328	5396	5464	5532
3.40	11. 5600	5668	5736	5804	5872	5940	6008	6076	6145	6213
41	6281	6349	6417	6486	6554	6622	6691	6759	6827	6896
42	6964	7032	7101	7169	7238	7306	7375	7443	7512	7580
43	7649	7718	7786	7855	7924	7992	8061	8130	8198	8267
44	8336	8405	8474	8542	8611	8680	8749	8818	8887	8956
45	11. 9025	9094	9163	9232	9301	9370	9439	9508	9578	9647
46	11. 9716	9785	9854	9924	9993	0062	0132	0201	0270	0340
47	12. 0409	0478	0548	0617	0687	0756	0826	0895	0965	1034
48	1104	1174	1243	1313	1383	1452	1522	1592	1661	1731
49	1801	1871	1941	2010	2080	2150	2220	2290	2360	2430
3.50	12. 2500	2570	2640	2710	2780	2850	2920	2990	3061	3131

N.	N² 0	1	2	3	4	5	6	7	8	9

P. P.

	60	61
1	6.0	6.1
2	12.0	12.2
3	18.0	18.3
4	24.0	24.4
5	30.0	30.5
6	36.0	36.6
7	42.0	42.7
8	48.0	48.8
9	54.0	54.9

	62	63
1	6.2	6.3
2	12.4	12.6
3	18.6	18.9
4	24.8	25.2
5	31.0	31.5
6	37.2	37.8
7	43.4	44.1
8	49.6	50.4
9	55.8	56.7

	64	65
1	6.4	6.5
2	12.8	13.0
3	19.2	19.5
4	25.6	26.0
5	32.0	32.5
6	38.4	39.0
7	44.8	45.5
8	51.2	52.0
9	57.6	58.5

	66	67
1	6.6	6.7
2	13.2	13.4
3	19.8	20.1
4	26.4	26.8
5	33.0	33.5
6	39.6	40.2
7	46.2	46.9
8	52.8	53.6
9	59.4	60.3

	68	69
1	6.8	6.9
2	13.6	13.8
3	20.4	20.7
4	27.2	27.6
5	34.0	34.5
6	40.8	41.4
7	47.6	48.3
8	54.4	55.2
9	61.2	62.1

	70	71
1	7.0	7.1
2	14.0	14.2
3	21.0	21.3
4	28.0	28.4
5	35.0	35.5
6	42.0	42.6
7	49.0	49.7
8	56.0	56.8
9	63.0	63.9

TAFEL IX.

DIE

ANTILOGARITHMEN

VON 000 BIS 999.

L	N 0	1	2	3	4	5	6	7	8	9	P. P.
00	1000	1002	1005	1007	1009	1012	1014	1016	1019	1021	
01	1023	1026	1028	1030	1033	1035	1038	1040	1042	1045	
02	1047	1050	1052	1054	1057	1059	1062	1064	1067	1069	
03	1072	1074	1076	1079	1081	1084	1086	1089	1091	1094	4
04	1096	1099	1102	1104	1107	1109	1112	1114	1117	1119	1 0.4
05	1122	1125	1127	1130	1132	1135	1138	1140	1143	1146	2 0.8
06	1148	1151	1153	1156	1159	1161	1164	1167	1169	1172	3 1.2 4 1.6
07	1175	1178	1180	1183	1186	1189	1191	1194	1197	1199	5 2.0 6 2.4
08	1202	1205	1208	1211	1213	1216	1219	1222	1225	1227	7 2.8 8 3.2
09	1230	1233	1236	1239	1242	1245	1247	1250	1253	1256	9 3.6
10	1259	1262	1265	1268	1271	1274	1276	1279	1282	1285	
11	1288	1291	1294	1297	1300	1303	1306	1309	1312	1315	
12	1318	1321	1324	1327	1330	1334	1337	1340	1343	1346	
13	1349	1352	1355	1358	1361	1365	1368	1371	1374	1377	5
14	1380	1384	1387	1390	1393	1396	1400	1403	1406	1409	1 0.5 2 1.0
15	1413	1416	1419	1422	1426	1429	1432	1435	1439	1442	3 1.5 4 2.0
16	1445	1449	1452	1455	1459	1462	1466	1469	1472	1476	5 2.5 6 3.0
17	1479	1483	1486	1489	1493	1496	1500	1503	1507	1510	7 3.5 8 4.0
18	1514	1517	1521	1524	1528	1531	1535	1538	1542	1545	9 4.5
19	1549	1552	1556	1560	1563	1567	1570	1574	1578	1581	
20	1585	1589	1592	1596	1600	1603	1607	1611	1614	1618	
21	1622	1626	1629	1633	1637	1641	1644	1648	1652	1656	
22	1660	1663	1667	1671	1675	1679	1683	1687	1690	1694	6
23	1698	1702	1706	1710	1714	1718	1722	1726	1730	1734	1 0.6 2 1.2
24	1738	1742	1746	1750	1754	1758	1762	1766	1770	1774	3 1.8 4 2.4
25	1778	1782	1786	1791	1795	1799	1803	1807	1811	1816	5 3.0 6 3.6
26	1820	1824	1828	1832	1837	1841	1845	1849	1854	1858	7 4.2 8 4.8
27	1862	1866	1871	1875	1879	1884	1888	1892	1897	1901	9 5.4
28	1905	1910	1914	1919	1923	1927	1932	1936	1941	1945	
29	1950	1954	1959	1963	1968	1972	1977	1982	1986	1991	
30	1995	2000	2004	2009	2014	2018	2023	2028	2032	2037	
31	2042	2046	2051	2056	2061	2065	2070	2075	2080	2084	
32	2089	2094	2099	2104	2109	2113	2118	2123	2128	2133	7
33	2138	2143	2148	2153	2158	2163	2168	2173	2178	2183	1 0.7 2 1.4
34	2188	2193	2198	2203	2208	2213	2218	2223	2228	2234	3 2.1 4 2.8
35	2239	2244	2249	2254	2259	2265	2270	2275	2280	2286	5 3.5 6 4.2
36	2291	2296	2301	2307	2312	2317	2323	2328	2333	2339	7 4.9 8 5.6
37	2344	2350	2355	2360	2366	2371	2377	2382	2388	2393	9 6.3
38	2399	2404	2410	2415	2421	2427	2432	2438	2443	2449	
39	2455	2460	2466	2472	2477	2483	2489	2495	2500	2506	
40	2512	2518	2523	2529	2535	2541	2547	2553	2559	2564	
41	2570	2576	2582	2588	2594	2600	2606	2612	2618	2624	
42	2630	2636	2642	2649	2655	2661	2667	2673	2679	2685	8
43	2692	2698	2704	2710	2716	2723	2729	2735	2742	2748	1 0.8 2 1.6
44	2754	2761	2767	2773	2780	2786	2793	2799	2805	2812	3 2.4 4 3.2
45	2818	2825	2831	2838	2844	2851	2858	2864	2871	2877	5 4.0 6 4.8
46	2884	2891	2897	2904	2911	2917	2924	2931	2938	2944	7 5.6 8 6.4
47	2951	2958	2965	2972	2979	2985	2992	2999	3006	3013	9 7.2
48	3020	3027	3034	3041	3048	3055	3062	3069	3076	3083	
49	3090	3097	3105	3112	3119	3126	3133	3141	3148	3155	
50	3162	3170	3177	3184	3192	3199	3206	3214	3221	3228	
L	N 0	1	2	3	4	5	6	7	8	9	

L	N 0	1	2	3	4	5	6	7	8	9	P. P.		
50	3162	3170	3177	3184	3192	3199	3206	3214	3221	3228		9	11
51	3236	3243	3251	3258	3266	3273	3281	3289	3296	3304	1	0.9	1.1
52	3311	3319	3327	3334	3342	3350	3357	3365	3373	3381	2	1.8	2.2
53	3388	3396	3404	3412	3420	3428	3436	3443	3451	3459	3	2.7	3.3
54	3467	3475	3483	3491	3499	3508	3516	3524	3532	3540	4	3.6	4.4
55	3548	3556	3565	3573	3581	3589	3597	3606	3614	3622	5	4.5	5.5
56	3631	3639	3648	3656	3664	3673	3681	3690	3698	3707	6	5.4	6.6
57	3715	3724	3733	3741	3750	3758	3767	3776	3784	3793	7	6.3	7.7
58	3802	3811	3819	3828	3837	3846	3855	3864	3873	3882	8	7.2	8.8
59	3890	3899	3908	3917	3926	3936	3945	3954	3963	3972	9	8.1	9.9
60	3981	3990	3999	4009	4018	4027	4036	4046	4055	4064		12	13
61	4074	4083	4093	4102	4111	4121	4130	4140	4150	4159	1	1.2	1.3
62	4169	4178	4188	4198	4207	4217	4227	4236	4246	4256	2	2.4	2.6
63	4266	4276	4285	4295	4305	4315	4325	4335	4345	4355	3	3.6	3.9
64	4365	4375	4385	4395	4406	4416	4426	4436	4446	4457	4	4.8	5.2
65	4467	4477	4487	4498	4508	4519	4529	4539	4550	4560	5	6.0	6.5
66	4571	4581	4592	4603	4613	4624	4634	4645	4656	4667	6	7.2	7.8
67	4677	4688	4699	4710	4721	4732	4742	4753	4764	4775	7	8.4	9.1
68	4786	4797	4808	4819	4831	4842	4853	4864	4875	4887	8	9.6	10.4
69	4898	4909	4920	4932	4943	4955	4966	4977	4989	5000	9	10.8	11.7
70	5012	5023	5035	5047	5058	5070	5082	5093	5105	5117		14	15
71	5129	5140	5152	5164	5176	5188	5200	5212	5224	5236	1	1.4	1.5
72	5248	5260	5272	5284	5297	5309	5321	5333	5346	5358	2	2.8	3.0
73	5370	5383	5395	5408	5420	5433	5445	5458	5470	5483	3	4.2	4.5
74	5495	5508	5521	5534	5546	5559	5572	5585	5598	5610	4	5.6	6.0
75	5623	5636	5649	5662	5675	5689	5702	5715	5728	5741	5	7.0	7.5
76	5754	5768	5781	5794	5808	5821	5834	5848	5861	5875	6	8.4	9.0
77	5888	5902	5916	5929	5943	5957	5970	5984	5998	6012	7	9.8	10.5
78	6026	6039	6053	6067	6081	6095	6109	6124	6138	6152	8	11.2	12.0
79	6166	6180	6194	6209	6223	6237	6252	6266	6281	6295	9	12.6	13.5
80	6310	6324	6339	6353	6368	6383	6397	6412	6427	6442		16	17
81	6457	6471	6486	6501	6516	6531	6546	6561	6577	6592	1	1.6	1.7
82	6607	6622	6637	6653	6668	6683	6699	6714	6730	6745	2	3.2	3.4
83	6761	6776	6792	6808	6823	6839	6855	6871	6887	6902	3	4.8	5.1
84	6918	6934	6950	6966	6982	6998	7015	7031	7047	7063	4	6.4	6.8
85	7079	7096	7112	7129	7145	7161	7178	7194	7211	7228	5	8.0	8.5
86	7244	7261	7278	7295	7311	7328	7345	7362	7379	7396	6	9.6	10.2
87	7413	7430	7447	7464	7482	7499	7516	7534	7551	7568	7	11.2	11.9
88	7586	7603	7621	7638	7656	7674	7691	7709	7727	7745	8	12.8	13.6
89	7762	7780	7798	7816	7834	7852	7870	7889	7907	7925	9	14.4	15.3
90	7943	7962	7980	7998	8017	8035	8054	8072	8091	8110		18	19
91	8128	8147	8166	8185	8204	8222	8241	8260	8279	8299	1	1.8	1.9
92	8318	8337	8356	8375	8395	8414	8433	8453	8472	8492	2	3.6	3.8
93	8511	8531	8551	8570	8590	8610	8630	8650	8670	8690	3	5.4	5.7
94	8710	8730	8750	8770	8790	8810	8831	8851	8872	8892	4	7.2	7.6
95	8913	8933	8954	8974	8995	9016	9036	9057	9078	9099	5	9.0	9.5
96	9120	9141	9162	9183	9204	9226	9247	9268	9290	9311	6	10.8	11.4
97	9333	9354	9376	9397	9419	9441	9462	9484	9506	9528	7	12.6	13.3
98	9550	9572	9594	9616	9638	9661	9683	9705	9727	9750	8	14.4	15.2
99	9772	9795	9817	9840	9863	9886	9908	9931	9954	9977	9	16.2	17.1
00	0000											20	21
											1	2.0	2.1
											2	4.0	4.2
											3	6.0	6.3
											4	8.0	8.4
											5	10.0	10.5
											6	12.0	12.6
											7	14.0	14.7
											8	16.0	16.8
											9	18.0	18.9
												22	23
											1	2.2	2.3
											2	4.4	4.6
											3	6.6	6.9
											4	8.8	9.2
											5	11.0	11.5
											6	13.2	13.8
											7	15.4	16.1
											8	17.6	18.4
											9	19.8	20.7
L	N 0	1	2	3	4	5	6	7	8	9			

Beständige Logarithmen.

		log	
Basis der natürlichen Logarithmen e	= 2,7182 8183 .	0.4342 9448	
Modul der gemeinen Logarithmen m	= 0,4342 9448 .	9.6377 8431	— 10
Radius des Kreises in Graden	= 57.29578 . . .	1.7581 2263	
„ „ „ in Minuten	= 3437.7468 . . .	3.5362 7388	
„ „ „ in Sekunden	= 206264.8 . . .	5.3144 2513	
Umfang des Kreises in Graden	= 360	2.5563 0250	
„ „ „ in Minuten	= 21600	4.3344 5375	
„ „ „ in Sekunden	= 1296000 . . .	6.1126 0500	
Verhältnis des Durchmessers zum Kreisumfang π	= 3.1415 9265 . .	0.4971 4987	

Dimensionen der Erde, nach Bessel.

		m		
Halbe grosse Achse (Radius des Äquators)	a =	6377397.156	6.8046 4346	
„ kleine (Umdrehungsachse)	b =	6356079.175	6.8031 8930	
Abplattung $\frac{a-b}{a} = \frac{1}{299.1528}$		= 0.00334277	7.5241 0699	— 10
Excentric. d. Umdreh.-Ellipse $\sqrt{\frac{a^2-b^2}{a^2}}$	= e =	0.08169683	8.9122 0521	— 10
$\sqrt{1-e^2}$		= 0.99665723	9.9985 4583	— 10
Ein Grad des Äquators	= 111306.6 Meter		5.0465 208	
Eine geographische Meile	= 7420.437 Meter . . .		3.8704 295	

Massvergleichung.

1 Kilometer	= 0,134763	geographische Meile . . .	9.1295 705	— 10
„	= 0,132758	preussische Meile	9.1230 62	— 10
„	= 0,621382	engl. Statute mile à 1760 Yard	9.7933 59	— 10
„	= 0,656180	englische Mile à 1666⅔ Yard	9.8170 23	— 10
„	= 0,937400	russische Werst	9.9719 25	— 10
1 Meter	= 0.2655167	preussische Rute	9.4240 92	— 10
„	= 3.186200	rheinländische Fuss	0.5032 73	
„	= 3.078444	pariser Fuss	0.4883 31	
„	= 3.280898	englische Fuss	0.5159 93	
1 Liter	= 0.873339	preussische Quart	9.9411 83	— 10
„	= 0.706648	österreichische Mass	9.8492 03	— 10
„	= 0.220096	engl. imp. Gallon	9.3426 13	— 10
1 Kilogramm	= 2.13807	preussische Pfund	0.3300 22	
„	= 4.27615	preussische Mark	0.6310 53	
„	= 1.78566	österreichische Pfund . . .	0.2517 99	
„	= 2.20464	englische Pfund avoirdupois	0.3433 37	
„	= 2.67924	englische Troy Pfund . .	0.4280 12	

Gold, nach der gesetzlichen Ausprägung.

1 Zwanzigmarkstück	= 2.08264	Dukaten	0.3186 15
„	= 19.5806	Engl. Schilling . .	1.2918 26
„	= 4.76437	Dollar	0.6780 05
„	= 24.6913	Frank	1.3925 45

BEMERKUNG ZU DEN VORSTEHENDEN TAFELN.

Vierstellige Logarithmen-Tafeln sind im allgemeinen bisher wenig beachtet worden. Durch die Schule an die siebenstelligen Tafeln gewöhnt, greift man im späteren Leben wieder zu derselben Tafel, wenn einmal eine logarithmische Rechnung ausgeführt werden soll, und es ist dann auch ziemlich gleichgültig, ob einige Stellen mehr als nötig in Rechnung genommen werden. Sind dagegen lange Rechnungen auszuführen, so wird man wohltun, zuvor genau zu erwägen, wie viel Decimalstellen die Rechnung erfordert, und dann diejenige Tafel benutzen, welche nicht mehr und nicht weniger Stellen enthält. Die Abkürzung mehrstelliger Logarithmen, ebenso die Berücksichtigung der letzten bestrichelten Ziffer sind unpraktisch. Aus diesem Grunde hat man 10-, 7-, 6-, 5-, 4- und 3stellige Tafeln. Mit der geringeren Stellenzahl nimmt das Volumen der Tafel ab, so dafs die 3stellige nur noch die Form einer Visitenkarte hat, und das Aufschlagen der Logarithmen wird erleichtert, wenn man nur auf wenigen Seiten zu suchen hat. Aber nicht hierdurch allein ist das bequeme Rechnen bedingt; man will auch mit Leichtigkeit interpolieren, gewissermafsen den interpolierten Logarithmus à vue aus der Tafel entnehmen können, weshalb das Intervall möglichst klein zu nehmen ist. Die vielfach beliebte Tableauform für vierstellige Logarithmen entspricht zwar der ersten Bedingung, kann aber niemals die zweite erfüllen, und ist daher, abgesehen von andern Unbequemlichkeiten, für den steten Gebrauch nicht zu empfehlen.

Andere vierstellige Tafeln in Buchform widmen dem Gegenstande auch nicht die gebührende Aufmerksamkeit; so mufs das Trennen der ersten Ziffern der Logarithmen, welches bei fünfzifferigen noch einen Sinn hat, bei vierstelligen unbedingt verworfen werden, anderer fehlerhafter Einrichtungen nicht zu gedenken. Die meisten dieser Tafeln machen den Eindruck einer Spielerei mit Zahlen, der Ernst der Sache wird verkannt. Da aber eine grofse Menge von Rechnungen der vierstelligen Tafel zugewiesen werden mufs, so erhellt, dafs es mit deren Konstruktion nicht so leicht genommen werden darf. Abgesehen von dem Gebrauche in Schulen, den jeder wohlmeinende Lehrer empfehlen wird, will ich nur einer Klasse von Rechnungen Erwähnung tun, wo vierstellige Logarithmen vollständig ausreichen, nämlich der der Feldmesser-Arbeiten. Es erhellt dieses daraus, dafs die Längenmessungen selten einen geringeren Fehler als $^1/_3$pCt. ihrer Länge haben, wogegen der vierstellige Logarithmus einen zwanzigfach geringeren hat. Auch die hier zur Anwendung kommenden kleinen Theodoliten, von anderen Winkel-Instrumenten nicht zu reden, erreichen an Genauigkeit nicht den Wert des vierstelligen Logarithmus. Mit Ausnahme der Triangulation, wo fünf Stellen in Rechnung zu ziehen sind, genügen bei allen andern goniometrischen Rechnungen vier Stellen.

Einrichtung und Gebrauch der vorstehenden Tafeln sind im allgemeinen übereinstimmend mit meinen sieben-, sechs- und fünfstelligen Tafeln, und ich kann daher, auf jene verweisend, von einer Darlegung der Principien bei Konstruktion der einzelnen Teile, sowie von einer Gebrauchs-Anweisung Abstand nehmen, umsomehr als jeder, der mit Bewufstsein zur vierstelligen Tafel greift, zu den Eingeweihten zu rechnen ist. Es mögen daher nur die meistens in der Zahl der Stellen begründeten Abweichungen näher besprochen werden.

Die Tafel I. enthält die Logarithmen der Zahlen von 1 bis 2000. Die ersten beiden Seiten, welche bis 1000 gehen, würden genügen; da aber von 100 bis 200 die unbequemeren Differenzen von 43 bis 22 vorkommen, so sind

für dieses Intervall die beiden folgenden Seiten von 1000 bis 2000 hinzugefügt, dagegen die Differenz-Täfelchen nur von 22 an gegeben, welche Differenz dem Logarithmus der Zahl 200 entspricht. Die in Tafel II. enthaltenen Zahlen S und T für Bogen von 0 bis 10 Grad können angewendet werden, um Sinus oder Tangente eines kleinen Winkels oder umgekehrt den Winkel aus jenen mit aller Schärfe zu berechnen. Das Argument ist im ersten Falle der Bogen, im andern Log. Sin. oder Log. Tang. Die Tafel III. enthält die Logarithmen der trigonometrischen Funktionen, von 0 bis 8 Grad der leichteren Interpolation wegen von Hundertstel zu Hundertstel Grad fortschreitend, darauf von Zehntel zu Zehntel. Wenn die letztere Abteilung auf Pag. 24 mit 5 statt mit 8 Grad beginnt, so ist dieses der typographischen Anordnung wegen geschehen, um mit vollen Fünfern und Zehnern von Graden auf jeder Seite abzuschliefsen. Die Differenz-Täfelchen gehen in der ersten Abteilung von 0.5, in der zweiten von 7.0 Grad an. Tafel IV. gibt die Reduktion von Graden und Stunden, Minuten auf Decimalteile des Tages an. Die Tafeln V. und VI. für Summen und Differenzen, wenn die Logarithmen der Summanden gegeben sind, haben dieselbe Anordnung, wie in der fünf- und sechsstelligen Tafel, da ich diese für die bequemste halte. Hiermit würde dem engeren Bedürfnis genügt sein. Vielfachen Wünschen nachkommend sind indes noch eine Tafel der natürlichen Sinus und Tangenten, No. VII, dann eine Tafel zur Bildung der Fehler-Quadrate, No. VIII, übereinstimmend mit derselben Tafel in der Tafel fünfstelliger Logarithmen, endlich eine Tafel der Antilogarithmen, No. IX, hinzugefügt. Die letztere wird benutzt, wenn von einer Reihe gegebener Logarithmen nach einander die Zahlen gesucht werden, weil dann das geordnete Argument zum Vorteil gereicht.

Berlin, Januar 1874.

BREMIKER.

INHALT.

		Seite
Tafel I.	Die Logarithmen der Zahlen	2
„ II.	Logarithmen der Sinus und Tangenten kleiner Bogen	6
„ III.	Die Logarithmen der trigonometrischen Funktionen	8
„ IV.	Grade, Stunden, Minuten und Sekunden in Decimalteilen des Tages	32
„ V.	Die Logarithmen der Summen und Differenzen	33
„ VI.	Subtraktions-Logarithmen	36
„ VII.	Die natürlichen Sinus und Tangenten	40
„ VIII.	Die Quadrate der Zahlen	50
„ IX.	Die Antilogarithmen	58
„ X.	Beständige Logarithmen	60

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